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CITY OF PALMDALE
AVENUE S CORRIDOR AREA PLAN

ADOPTED BY CITY COUNCIL RESOLUTION NO. 98-061
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**AVENUE S CORRIDOR AREA PLAN
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1 Chapter 1 Overview of the Avenue S Corridor Area Plan

1.1 Why an Area Plan for the Avenue S Corridor?

In 1996 the Palmdale City Council directed the Planning Department to prepare a comprehensive plan for the land located north and south of Avenue S, within the southern portion of the City of Palmdale and portions of neighboring unincorporated County territory (see Figure 1 1). Because the Planning area is adjacent to a major street which carries high volumes of traffic east and west through the city it is experienced by many travelers and residents as a continuous corridor—hence, the name given to the planning area of Avenue S Corridor. The major objectives outlined by the City Council for the Avenue S Corridor Plan were to create a cohesive neighborhood with orderly development, provide for adequate circulation and infrastructure, protect public

Old Palmdale (Palmenthal) was first settled by Germans who were very thrifty people. Each family had an orchard, vineyard, and some alfalfa, getting their irrigation and domestic water from Littlerock Creek. Their ranches were well kept up, and they were very hospitable people, and had a welcome for everyone.

Evan L. Evens
Palmdale, 1927

Source: The Journal of the West Antelope Valley Historical Society

safety from seismic activity and other hazards, and enhance the streetscape through landscaping and design standards. Another objective was to recognize the historical significance of portions of the planning area in which the first settlers of Palmdale created the community originally known as “Palmenthal.”

In response to the City Council’s direction, this Area Plan was prepared for the Avenue S Corridor. An “area plan” is a document containing maps, policies and background text which is used to promote planning objectives within a specified geographic area. Area plans, also known as community plans, communicate the results of planning studies conducted for particular areas and provide policy direction on land use and development. The adoption of area plans is authorized by the California Government Code to allow cities and counties to guide the planning and development of areas within their communities which merit special consideration. When adopted, an area plan has the same force of law as the General Plan. Implementation of the policies set forth in the area plan will be achieved through the design review and planning approval process. An area plan affects property owners primarily through regulation of land uses and physical property improvements.

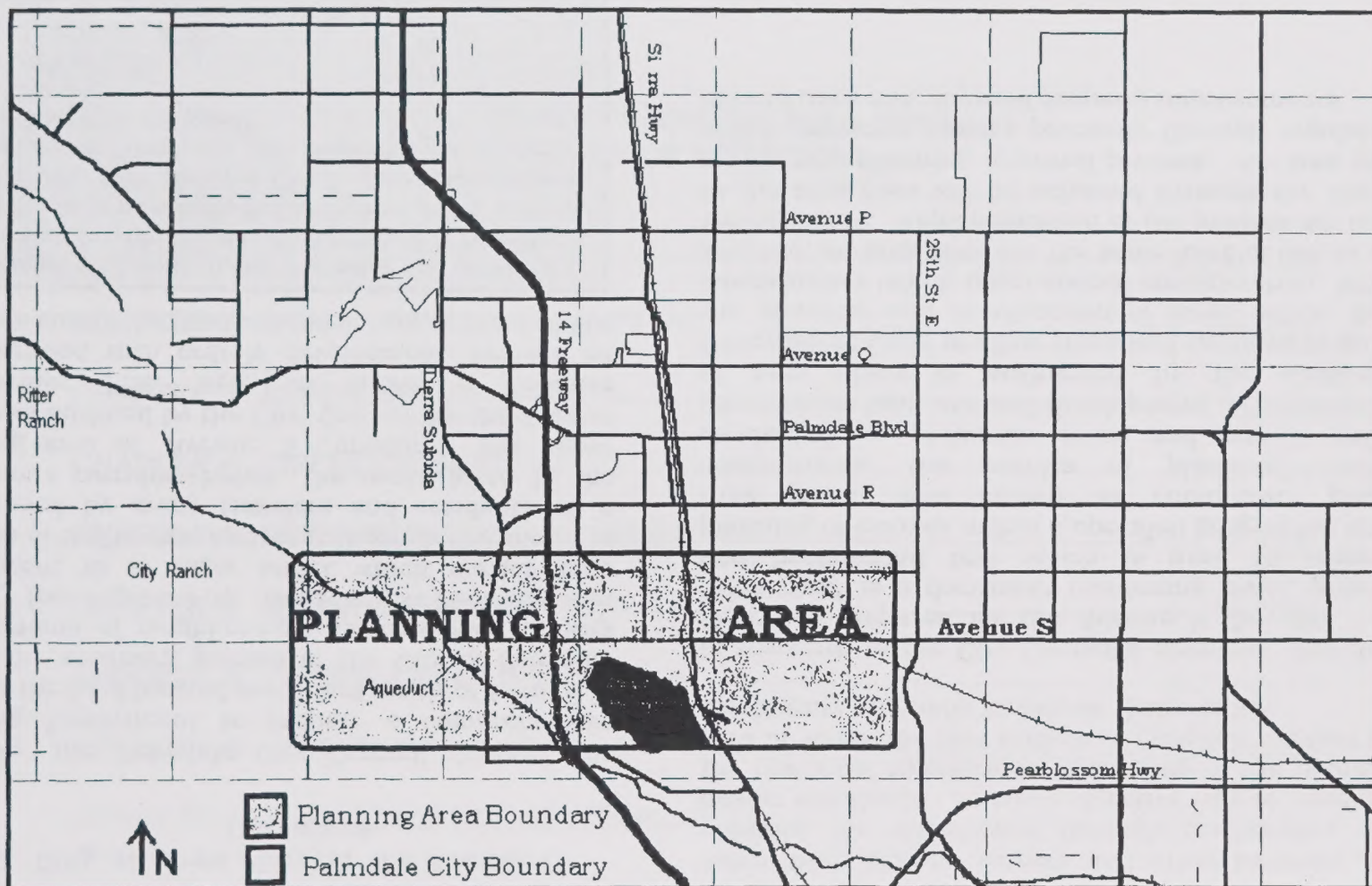


Figure 1 1. General Location of Avenue S Corridor Planning Area

Source: City of Palmdale Planning Dept.

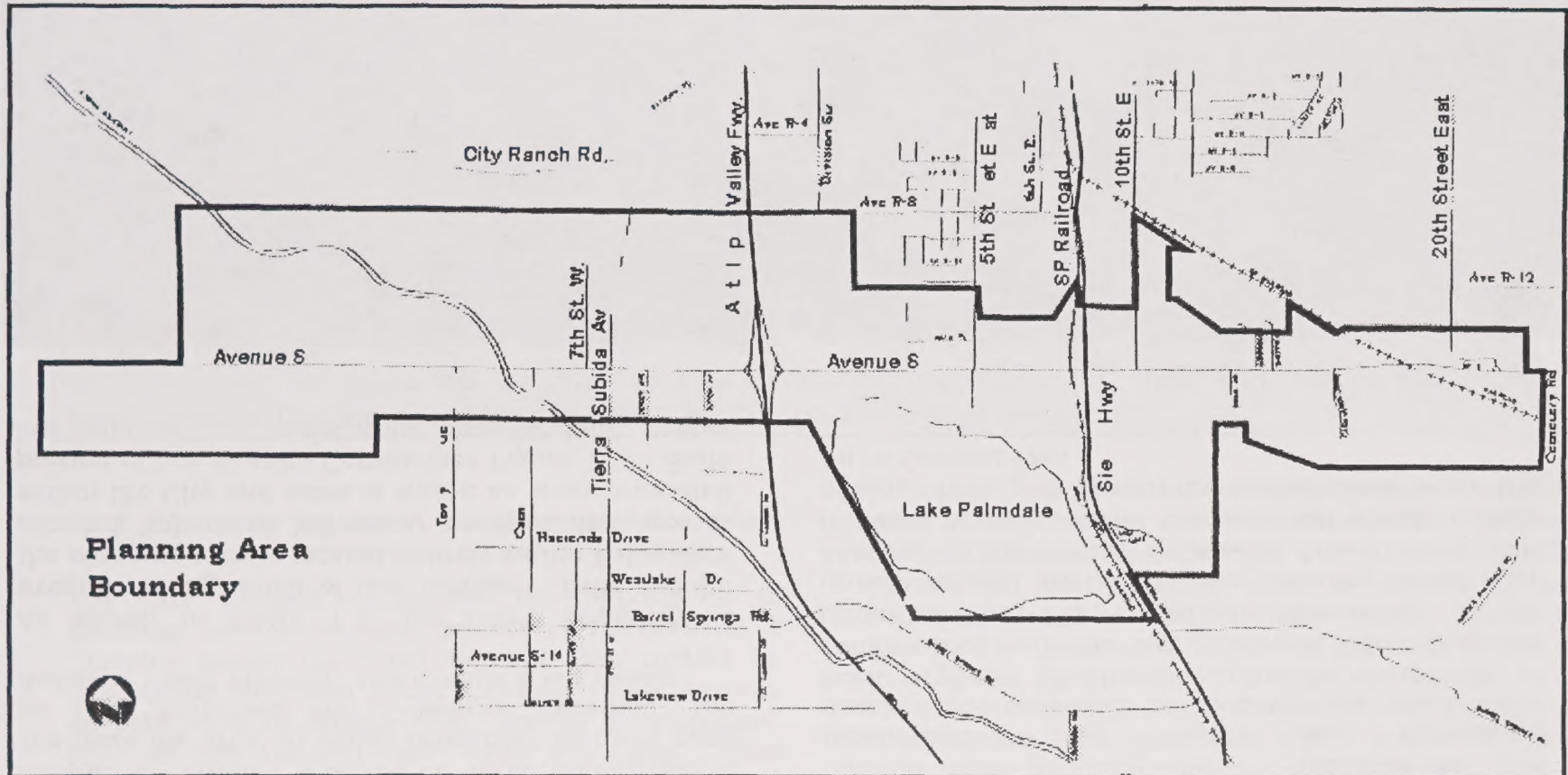


Figure 1-2: Planning Area Boundary

Source: City of Palmdale Planning Dept.

The Avenue S Corridor planning area boundary is shown on Figure 1 2. The planning area extends approximately four miles along Avenue S, from 20th Street West to 20th Street East, and generally includes land located about a half mile north and south of Avenue S. Photo 1 1 shows an aerial photograph of the planning area, in which prominent features such as Lake Palmdale, the California Aqueduct, the Antelope Valley Freeway and Avenue S are visible.

As shown in Photo 1 1, the City's boundary is irregular along much of this corridor. Even though the planning area is located entirely within Palmdale's adopted Sphere of Influence, some of this area is within the City and some is within an unincorporated portion of Los Angeles County (see Figure 1 1). State law requires that cities must plan for land located

within their adopted Sphere of Influence; therefore, the planning area contains land which has been addressed in the City's General Plan as well as the County's General Plan. In some cases, the two General Plans are not consistent with respect to land use in the planning area. Because of this inconsistency the County has considered development proposals in recent years which have been opposed by the City due to their lack of conformance with the City's General Plan. It is the intent of the City to initiate annexation of the unincorporated portion of the planning area, after adoption of the Avenue S Corridor Area Plan, so that ultimate development of the area will result in high quality managed growth in conformance with the City's General Plan.

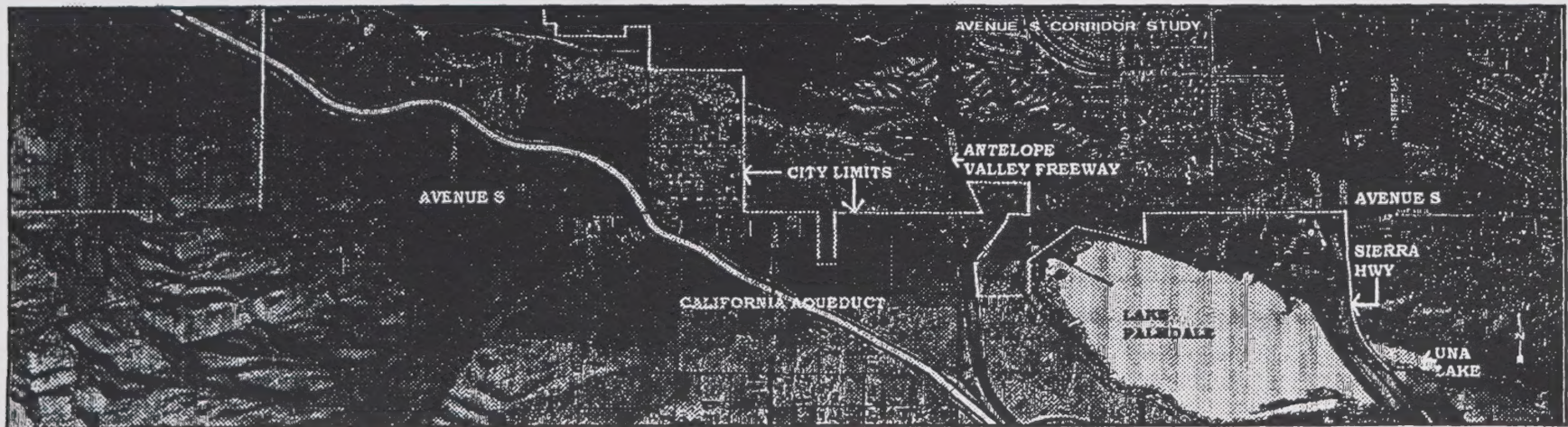


Photo 1 1. Aerial Photograph of the Planning Area with City/County Boundaries

Source: City of Palmdale Planning Dept.

Vision Statement

The Avenue S Corridor will be a functional, safe and attractive district in which residents can choose to live in a variety of neighborhoods from rural to suburban, and have opportunities to work and shop in nearby businesses. At the two major gateways to the City along Avenue S—one at the Antelope Valley Freeway and the other at Sierra Highway—development will portray a positive image of the community and preserve scenic views. This community image will recall the historic settlement of Palmenthal and will reflect a knowledge of and respect for early residents of the community. Land uses within the corridor will be supported by adequate infrastructure systems and Avenue S will provide transportation efficiency for not only automobile users, but also bicycle commuters, trail enthusiasts and evening strollers. Public facilities such as the City park and ride lots will encourage the use of more energy-efficient transportation modes including transit and car pools. Development of the corridor will ensure public safety through setbacks from fault zones, gas lines and other known hazards. Lake Palmdale will continue to be a source of clean drinking water and spectacular open space views will be preserved for enjoyment by City residents and visitors.

1.2 Planning Issues in the Avenue S Corridor

The City Council recognized the importance of planning for the western portion of the Avenue S Corridor during the 1993 General Plan update by designating land west of the Antelope Valley Freeway on both sides of Avenue S as “Special Development” (SD) on the General Plan Land Use Map. This designation was given to areas which merit focused planning efforts to ensure that special opportunities and constraints are considered and that adequate streets, utilities and public services are in place to serve residents and commercial activities.

Although Avenue S is currently paved throughout most of the planning area, it becomes a dirt road west of the California Aqueduct at Tovey Avenue. This portion of the planning area is semi-rural and contains large-lot subdivisions and homesites bordered by open space which was previously used for grazing and agriculture. The approved Specific Plans for City Ranch and Ritter Ranch planned residential communities are located west of 20th Street West, and will use the westerly extension of Avenue S to connect the planned 12,600 homes in those projects with the Antelope Valley Freeway. When these projects are constructed, Avenue S will be widened and paved to provide a six-lane road from 20th Street West to the Freeway.

Along the eastern portion of the Avenue S Corridor there is a mixed pattern of urban development and vacant land, commercial and residential zone designations, architectural and landscape themes, and public uses, including the original Palmenthal cemetery. Inclusion of this area into the Area Plan provides the City with an opportunity to unify the appearance of the corridor, address land use compatibility issues, and recognize the historic significance of the early settlement of Palmenthal. Several hundred acres of undeveloped land remain interspersed between a variety of existing uses which include park and ride lots, single and multi-family homes, commercial strip centers, medical offices, a

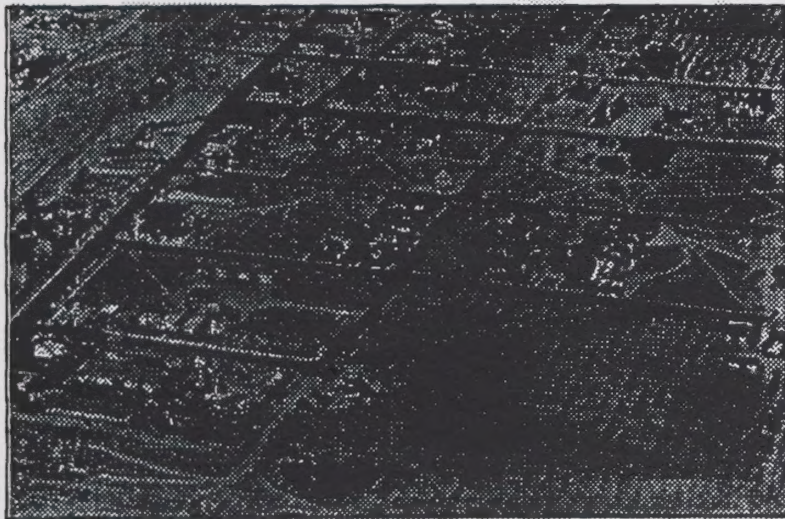


Photo 1-2: Historic aerial photograph of Palmdale taken in 1937

Source: City of Palmdale Library

church, newspaper publisher, mini-warehouse storage facility and water treatment plant. Under the current General Plan, approximately 90 acres of this vacant land located on the north side of Avenue S between 10th and 20th Streets East are designated for future multi-family residential development, and over 75 acres are designated for future retail and service commercial uses. This pattern of zoning provides an overabundance of commercial land use, and does not provide for community facilities such as parks which are needed to support future residents. A need was identified to re-examine the land use designations along the easterly portion of Avenue S.

Because of the planning area's location, topography, environmental constraints, historic and visual resources, and significance as a gateway to the City, developing a long range land use and infrastructure plan offers unique planning challenges. In terms of circulation, for example, Avenue S serves as a high-volume commuter street with freeway access. Because of the need to maintain reasonable speeds for this traffic, the challenge for planning land uses along Avenue S is to consider access points and noise volumes, while allowing continued residential development in the area. In terms of cultural resources, the original settlement of Palmenthal, which centered along Avenue S east of 20th Street East, is of important historic interest to the community. The planning challenge is to recognize Palmdale's history in this area with sensitive architecture and monumentation, while allowing continued development. With respect to environmental constraints, development plans must

consider the location of the San Andreas Fault, which transects the planning area from east to west, as well as the location of two high pressure natural gas lines. The hillsides in the planning area provide development opportunities which must be balanced with the need to ensure public safety. Besides providing a scenic backdrop for the planning area, these hillsides also prevent the easy extension of sewer lines into portions of the corridor presenting a challenge in terms of providing adequate infrastructure to serve commercial development adjacent to the freeway. Finally the scenic view of the Antelope Valley which open up to motorists descending the grade along the Antelope Valley Freeway from Escondido Canyon toward the valley floor also present a planning challenge: how to preserve these views to create a spectacular gateway to the City while allowing responsible, planned development along the Freeway and Avenue S.

1.3 Needs and Objectives for the Avenue S Corridor Area Plan

Based on review of the opportunities and constraints described in Chapter 2, several needs and objectives were identified regarding the planning process for the Avenue S Corridor. These needs and objectives are listed below:

- 1. New development should be compatible with the City's General Plan policies and with existing development.**

As noted above, there are a variety of existing uses and zone designations within the planning area. Some of these conform with the General Plan maps and policies, and some do not. Non-conforming uses should be allowed to continue in accordance with the Zoning Ordinance, until they are brought into conformance.

General Plan policies are currently in place that regulate development within areas constrained by natural topography, earthquake faults, inadequate infrastructure and other development limitations. Other policies address land use compatibility issues and resource preservation. These General Plan policies should be reviewed to determine appropriate land use designations within the Avenue S Corridor planning area, in conformance with existing goals, policies and objectives.

- 2. Evaluate potential for commercial development near the intersection of the Antelope Valley Freeway and Avenue S.**

Considering that 12,600 homes have been approved within the City Ranch and Ritter Ranch planned communities at the west end of the City, future commercial uses may be appropriate in some areas west of the freeway along Avenue S. In addition, pressure for commercial development near the Avenue S freeway off-ramps has resulted in the need to determine whether commercial development is feasible based on the site and infrastructure constraints at this location.

- 3. Through sound traffic and circulation planning, create a community where people know with ease where they are and how to get where they are going.**

A well-designed streetscape system should be developed which designates major street intersections as gateway nodes and announces entries into Palmdale. A street system hierarchy should be established which maintains acceptable levels of service throughout the study area through provision of appropriate right-of-way easements and street improvements. The circulation plan should also incorporate and enhance the City's adopted street system of trails and bikeways and make availability and accessibility of park and ride facilities a priority

- 4 Networks of infrastructure facilities and community services should support urban development, including water and sewer systems, storm water drainage and flood control facilities, dry utilities, and public safety functions.**

Infrastructure systems must be available and appropriately sized for new construction. Fire protection and law enforcement service levels should be maintained from these service agencies.

- 5. New development should be constructed in accordance with natural land forms.**

The project area contains scenic views of Lake Palmdale, Una Lake, the California Aqueduct and surrounding hillsides which must be maintained, along with preserving long-range views of the community from surrounding rural hillside neighborhoods outside the project area. Community design standards should be developed to address building massing and placement in an effort to maintain view corridors where possible.

- 6. Note the relationship between physical safety and the design of the city**

Intensity of land uses should consider the location of fault lines, the two high-pressure gas lines and preservation of the City's drinking water supply contained in Lake Palmdale.

- 7 Maintain the City's physical and social variety**

Open spaces, topography historic landmarks, distinctive neighborhoods, appropriate height, bulk and color of new buildings, and public views of the lake and surrounding mountains all contribute to variety in the physical design of a community. The land use plan and community design guidelines established in the Avenue S Corridor Area Plan should consider these factors in determining appropriate uses and building design.

8. Celebrate the rich history of the Antelope Valley settlers.

Over 100 years ago, Palmenthal was the original settlement of the city later to become known as Palmdale. This community was located at approximately 27th Street East and Avenue S. Design standards that respect the historic nature of the area will create an identity for the area in keeping with the history of the Antelope Valley and the City of Palmdale.

9 Implement the provisions of the Avenue S Corridor Area Plan in areas currently under Los Angeles County's jurisdiction.

Areas outside of the City's boundaries would not be required to comply with the provisions adopted under the Avenue S Corridor Area Plan. However City staff has met with the County Regional Planning Department staff and coordinated planning efforts with them. To achieve full compliance, annexation of the unincorporated areas would be needed. Upon adoption of the Avenue S Corridor Area Plan and implementing ordinances, it is expected that such annexations could occur

1.4 Organization of the Avenue S Corridor Area Plan

The Avenue S Corridor Area Plan is organized into the following chapters, each of which addresses a different

aspect of the planning process so as to create a comprehensive policy document which will guide future development within the Avenue S Corridor **Chapter 1 Overview** defines the project and identifies the goals and vision for the Avenue S Corridor **Chapter 2 Environmental Conditions**, contains a description of existing physical conditions which affect the project area, including slopes, seismic hazards, cultural resources and areas containing sensitive biological resources. An analysis of how these existing conditions will affect future development patterns within the Avenue S Corridor is also presented in Chapter 2.

Chapter 3 Land Use, contains the proposed land use strategies and designations for the planning area based upon existing conditions, opportunities and constraints. The land use plan is designed to integrate with existing development as well as work with the area's natural characteristics. The land use plan also attempts to make explicit the urban design policies outlined in Chapter 3 by providing a safe, functional land use pattern made up of residential, commercial and public uses.

Chapter 4 Circulation, emphasizes the importance of all modes of travel within the planning area, including streets and highways, bikeways, public transit, transportation management strategies, and pedestrian access. The circulation system is designed to support existing development as well as the planned land uses outlined in Chapter 3 by providing transportation links between neighborhoods and throughout the region.

Chapter 5 Infrastructure, outlines how the planned land uses will be served with adequately sized drainage facilities, water lines, sewer facilities and other utilities. The support systems outlined in Chapters 4 and 5 also maintain consistency with the adopted General Plan policies described in Chapter 3.

Community Design guidelines are contained in **Chapter 6**, which outline landscape, streetscape and architectural themes which can provide a unified appearance throughout the corridor and reflect the historic setting of Palmdale's original town center "Gateway" entry statements to the City at the freeway off ramp and Sierra Highway are also included in this design.

1.5 Relationship to the General Plan

The General Plan contains goals, objectives and policies of a general nature which pertain to all land within the Sphere of Influence of the City of Palmdale. The provisions of the Avenue S Corridor Area Plan are intended to supplement the General Plan by providing specific guidelines for development within the planning area. The Area Plan was developed utilizing current General Plan policies as described in Chapter 3. Subsequent to adoption of the Area Plan, appropriate amendments to the General Plan Land Use map and text will be made to incorporate the land use plan and other provisions contained in this document.

1.6 Area Plan Review Process

A preliminary land use plan for the Avenue S Corridor was developed based on the issues described in Chapter 2. Property owners within the Corridor study area were invited to attend an informational meeting held by the Planning Department on May 20 1997. This meeting was attended by approximately 30 interested property owners who provided verbal and written input on this plan. A second public workshop presenting Chapter 1 of the Draft Area Plan was held before the Planning Commission on September 18, 1997.

Following that meeting, draft chapters of the Area Plan were presented to the Planning Commission during workshops held on December 4 1997 January 15, 1998 and February 5, 1998. Based on input and direction received from the Planning Commission during these meetings, the Draft Area Plan document was then compiled and distributed for review by affected outside agencies. A Negative Declaration was also prepared and circulated for a 30-day public review period.

On May 21 1998 the Planning Commission adopted Resolution No. PC 1998-019 recommending adoption of the Area Plan for the Avenue S Corridor to the City Council. On June 10 1998, the City Council adopted Resolution No. 98-061 adopting the plan.

2. Chapter 2 Environmental Conditions In the Avenue S Corridor

2.1 What are the Environmental Resources and Hazards within the Avenue S Corridor?

The Avenue S Corridor is rich in natural resources, with a wide range of plant communities, scenic hillsides, prehistoric and historic cultural resources, unique rock formations, lakes, and sweeping, panoramic views of both the Antelope Valley and the San Gabriel and Sierra Pelona hillsides. Conversely the area is affected by earthquake fault zones, potential hazards from natural gas transmission pipelines, and areas of high noise levels. This Chapter of the Area Plan discusses the broad range of environmental factors that make up the physical characteristics of the Avenue S Corridor

To assist in evaluating the planning area's environmental conditions, the City contracted with a consultant to prepare a report identifying the environmental constraints affecting the study area. This report, *Avenue S Corridor Study Area Final Environmental Constraints Analysis Report* prepared by Jones & Stokes Associates dated December 1996 is available for review in the Planning Department. The report identified several potential constraints to future development including earthquake faults, significant hillside slopes, risks associated with the two high-pressure gas lines as well as areas of valuable plant and animal habitat, particularly surrounding Lake Palmdale and Una Lake.

Flooding, drainage, groundwater and water quality issues were reviewed and determined not to be a



Photo 2-1. This view of the west end of the study area shows the dramatic slopes and hillsides bordering portions of Avenue S.

Source: City of Palmdale Planning Dept.

constraint to future development, provided appropriate protection measures are enforced. For example, the report outlines several environmental mitigation measures that have been incorporated into the land use, circulation and infrastructure plans for the Avenue S Corridor as a component of this document.

2.2 Existing Conditions, Constraints and Opportunities for Environmental Hazards

2.2.1 Biological Resources

The study area is situated in a transitional zone surrounded by the western Mojave Desert and the San Gabriel and Sierra Pelona Mountain ranges. Ten distinct biological communities were noted by the City's consultant. The locations of these communities are shown in Figure 2-1, and the acreage occupied by each community is given in Table 2 1

Table 2-1
Biological Communities
Found in the Study Area

Biological Communities	Acres
Juniper woodland scrub	351.2
Mixed desert scrub	336.0
Rabbitbrush scrub	368.7
Creosote bush scrub	102
Annual Grassland	62.5
Ruderal and bare areas	109.2
Riparian woodland	25.5
Open Water	275.4
Seasonal drainage	0.5
Developed Area	374.5
Total	2005.5

Source: Jones and Stokes

The majority of plant species found within these biological communities are common to the Mojave Desert region. These communities contain diverse wildlife species which can include desert tortoise (listed as threatened under the federal Endangered Species Act) and Mojave ground squirrel (listed as threatened under the California Endangered Species Act), as well as other special-status and common wildlife species.

Una Lake, Lake Palmdale, the Palmdale Ditch, the seasonal drainage areas, as well as the riparian woodland and scrub communities that border them, have a high groundwater table or near-surface saturation. These areas provide a relatively rare desert eco-system and have environmental significance because they support a wide range of bird populations and are expected to support several amphibian species. Because of their limited extent in southern California, these wetland areas are considered a sensitive natural community. This status is supported by the Department of Fish and Game's policy promoting no net loss of wetland habitat.

Desert vegetation, and in particular Joshua trees, have been identified in the City's General Plan as important biological resources in the community for their aesthetic, historical, and ecological values. The City's Native Vegetation Ordinance (Ordinance No. 952) was created to prevent the unregulated loss of the native desert environment and to preserve Joshua trees and other desert vegetation.

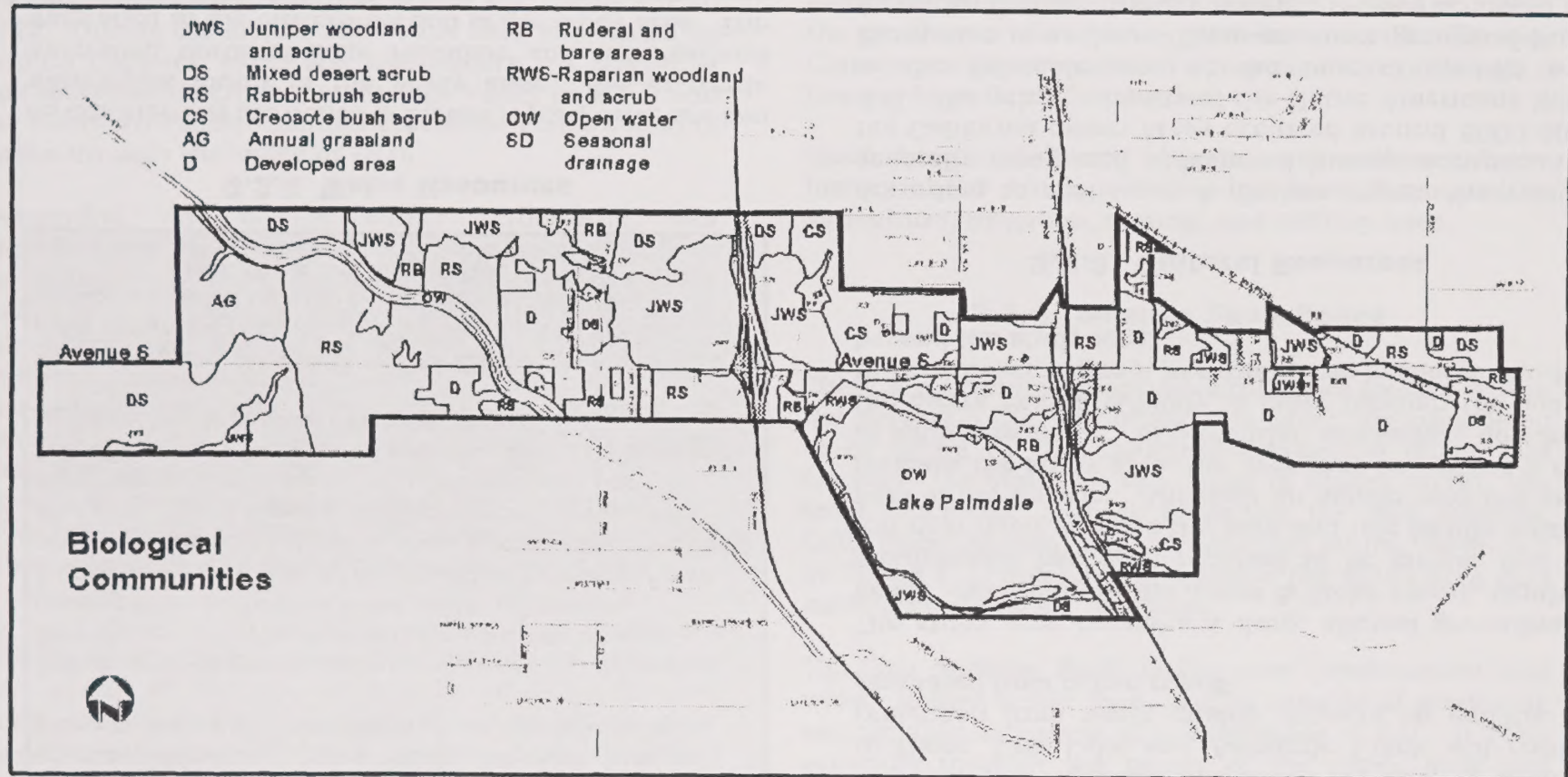


Figure 2-1. Biological Communities

Source: Jones and Stokes

From Alpine Heights in the Ana Verde Valley south of Palmdale, I looked out thirty-seven years ago (1883) over the immense expanse of land called the Antelope Valley. There were a few habitations scattered here and there with little green patches surrounding them which indicated an acreage of green fields and embryo orchards with which those early pioneers started the environment of our future Palmdale.

The climate was superb, rains were generous in those days. Springs were full of water and there were little streams running hither and thither in the fields and canyons. Wildflowers galore covered the ground with carpets of rose color, blue and gold. Mariposa lilies, lupines, larkspurs, baby blue eyes, golden poppies, lovely primroses, dainty white forget-me-nots, wild pinks and purple verbenas, and the beautiful desert aster were all over the gypsum hills, making joyful the hearts of those who loved flowers.

The wide desert, the Buttes and the distant mountains gave us daily entrancing pictures with their wonderful lights and shadows blended with the lovely colors of the prism.

Mrs. Nellie Lansing. (1920)

Source: Antelope Valley Pioneers.

2.2.2 Water Resources

As described in the Jones & Stokes report, there are two watersheds found in the study area: the Anaverde watershed north of Lake Palmdale and the Pearland watershed in the eastern portion of the study area. The large surface water bodies found in the study area include Lake Palmdale and Una Lake.

Anaverde Creek, the Palmdale Ditch and the California Aqueduct are also included as surface water resources.

The Palmdale Ditch is a man-made structure which conveys stormwater runoff and water stored in the Littlerock Reservoir to Lake Palmdale for Palmdale Water District. The major surface water features requiring protection include domestic water supplies of the California Aqueduct and Lake Palmdale. In addition to these, Una Lake and Anaverde Creek will require protection from water quality impacts on aquatic life generated from urban runoff.

The study area contains a deep, alluvial groundwater basin. According to the Jones & Stoke report, depth of groundwater has been reported to be greater than 60 feet near Avenue S and the park and ride facility located west of the freeway. Although an aquifer may not exist beneath the study area, the area may be serving a role in aquifer recharge. In particular subsurface flow from the Sierra Pelona is likely to move through the soil to the northeast where it eventually can recharge aquifers beyond the study area.

2.2.3 Cultural Resources

According to the Jones & Stokes report, the earliest generally recognized widespread human occupation of the California desert areas occurred around 8000-5000 B.C. The ethnic identity of the Native Americans living in the Palmdale area at the time of contact with Europeans is unclear. There are three groups of North American Indians that are thought to have occupied the Antelope Valley: the Vanyume Serrano, the Tataviam and the Kitanemuk. These groups traded with groups throughout the California coast and as far east as the Colorado River. Most likely these groups settled in the

southern Antelope Valley because of the number of springs and sag ponds caused by seismic activity

The Antelope Valley was first visited by Europeans in 1722. During the middle 1800's the area was visited by various trappers, explorers, and miners. A stage line was established across the Antelope Valley in 1861 and the Southern Pacific Railroad completed construction of tracks through the valley in 1876

Palmenthal, one of the earlier settlements, was established in 1886 by Swiss and German families from the Midwest. At that time, the town consisted of a livery stable, general store, church, school, blacksmith shop, saloon and land office. The settlers planted orchards, vineyards, and alfalfa fields. In 1890 the post office was established and the name was changed to Palmdale. The area bounded by 25th and 30th Streets East and Avenue R and Avenue S was the general location of the settlement, although the cemetery for the town was established near 20th Street East and still exists within the Avenue S Corridor planning area.

By 1899 because of drought and land deed problems, all but one family moved away. Some of the buildings were moved to the new town of Palmdale established closer to the railroad tracks. Other buildings were carried away piece by piece for the wood and other building needs. The Palmdale Cemetery on 20th Street East north of Avenue S, and the old schoolhouse, located now in McAdam Park, are the only known cultural resources remaining of historic Palmenthal.

Based on a records search done for the Jones & Stokes report, there are three prehistorical sites, three historical sites, and one site with both prehistorical and historical components that have been recorded within the study area. In addition to these sites, the Palmdale Cemetery is also considered a historical site, although it has not been formally recorded.

Since the establishment of permanent settlements, the history of the Antelope Valley has been dominated by agriculture, irrigation, mining, and military uses.

2.2.4 Seismic Fault Zones

There are several earthquake fault zones located within the Avenue S Corridor study area which are considered to be active by the California Division of Mines and Geology. As stated in the Jones & Stokes report, the most prominent of these faults are the San Andreas, Little Rock, Nadeau, and the Cemetery faults. As shown in Figure 2 2, these faults traverse the study area in a northwest-southeast direction.

The San Andreas Fault is the most predominant and widely known active fault, and is capable of producing earthquakes in excess of a magnitude of 8.0. It runs generally through the center of the study area and crosses Avenue S between 5th Street East and the Antelope Valley Freeway. The San Andreas Fault has produced damaging earthquakes in the Palmdale area as recently as 1857.

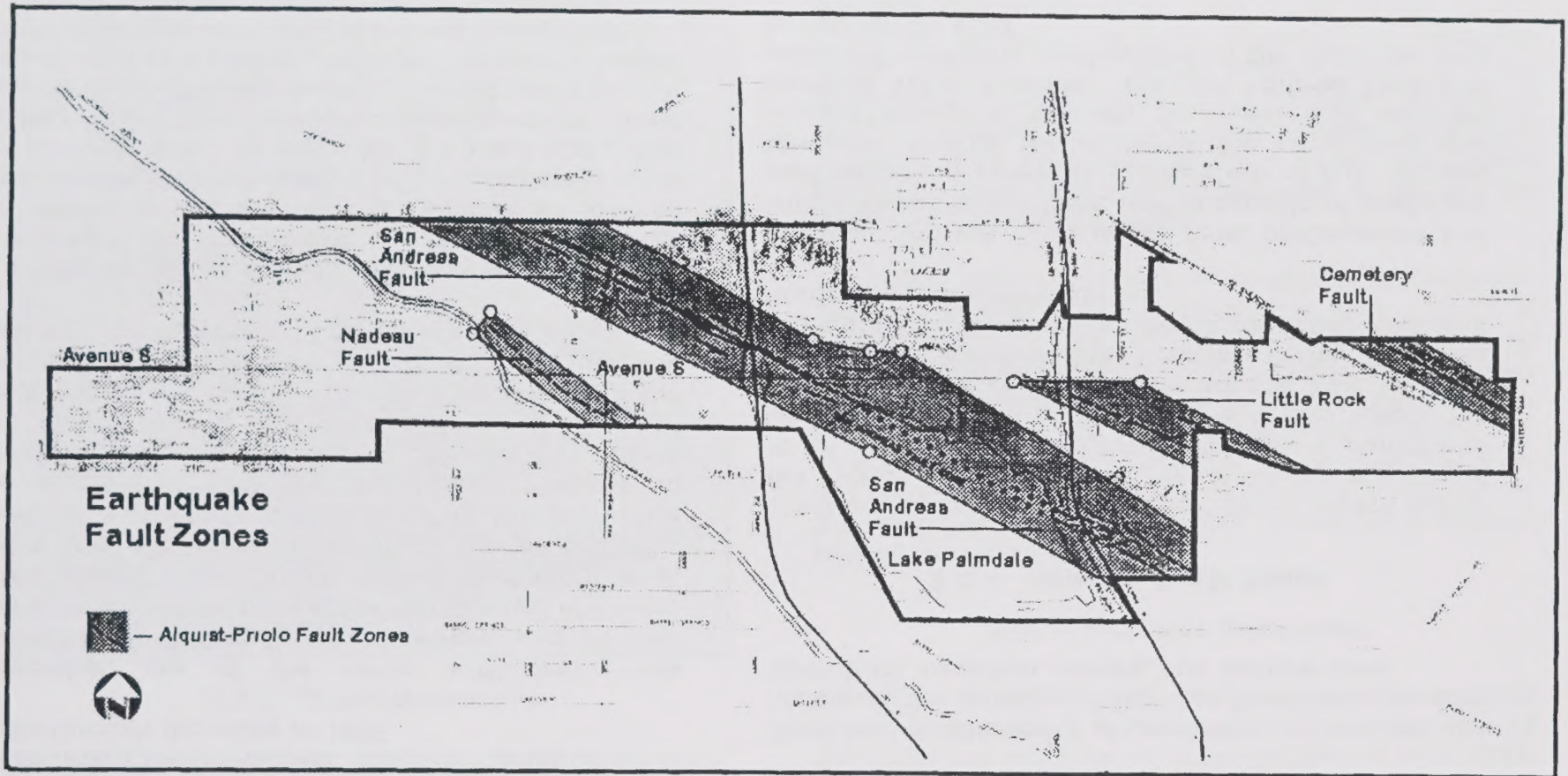


Figure 2-2: Seismic Hazard Areas

Source: Jones and Stokes

Affiliated with the San Andreas rift zone, the Little Rock Fault is located adjacent and parallel to the San Andreas on the south side of Avenue S. It is approximately 2,000 feet north of the San Andreas fault and consists of various faults that run parallel below it. The Cemetery Fault is located approximately 4,800 feet north of the San Andreas fault in the eastern portion of the study area. The Nadeau Fault, located south of the San Andreas Fault, is considered the southern boundary of the active San Andreas rift zone. It crosses Avenue S west of the Antelope Valley Freeway between 7th Street West and Camares Drive. Information regarding the boundaries of the earthquake fault zones was obtained from the California Department of Conservation. The exact boundaries of the fault zones may extend beyond the areas shown on Figure 2 2; therefore, site-specific geotechnical studies may be required for new development outside the boundaries of the shaded areas.

The Jones and Stokes report states that in 1988 the Working Group on California Earthquake Probabilities estimated that an earthquake of 7.5 magnitude or greater has a 60 percent chance of occurring on the Palmdale segment of the San Andreas Fault within the next 30 years. Such an earthquake would likely produce displacement of 10-20 feet along or near the main trace of the San Andreas Fault and at least some

of this displacement may also occur on the Little Rock, Nadeau and Cemetery Faults.

2.2.5 Hillsides

The Jones & Stokes report references two distinct topographical regions: steep mountain slopes with deeply incised drainage courses associated with the northern flank of the Sierra Pelona mountain range, and slopes associated with the San Andreas and related faults. The latter includes pressure ridges evident along both sides of the freeway north of Avenue S and sag ponds which include both Lake Palmdale and Una Lake.

Jones & Stokes conducted a slope analysis to identify areas within the study area that have slopes greater than 10 percent (see Figure 2 3). The majority of the slopes identified to be greater than 10 percent are located west of the Antelope Valley Freeway. The area south of the California Aqueduct at the western end of the study area and the area north of Una Lake also contain several slopes in excess of 10 percent. The City's Hillside Management Ordinance regulates development in hillside areas by preserving open space on steeper terrain and allowing development that respects the natural terrain through limited, contour grading.

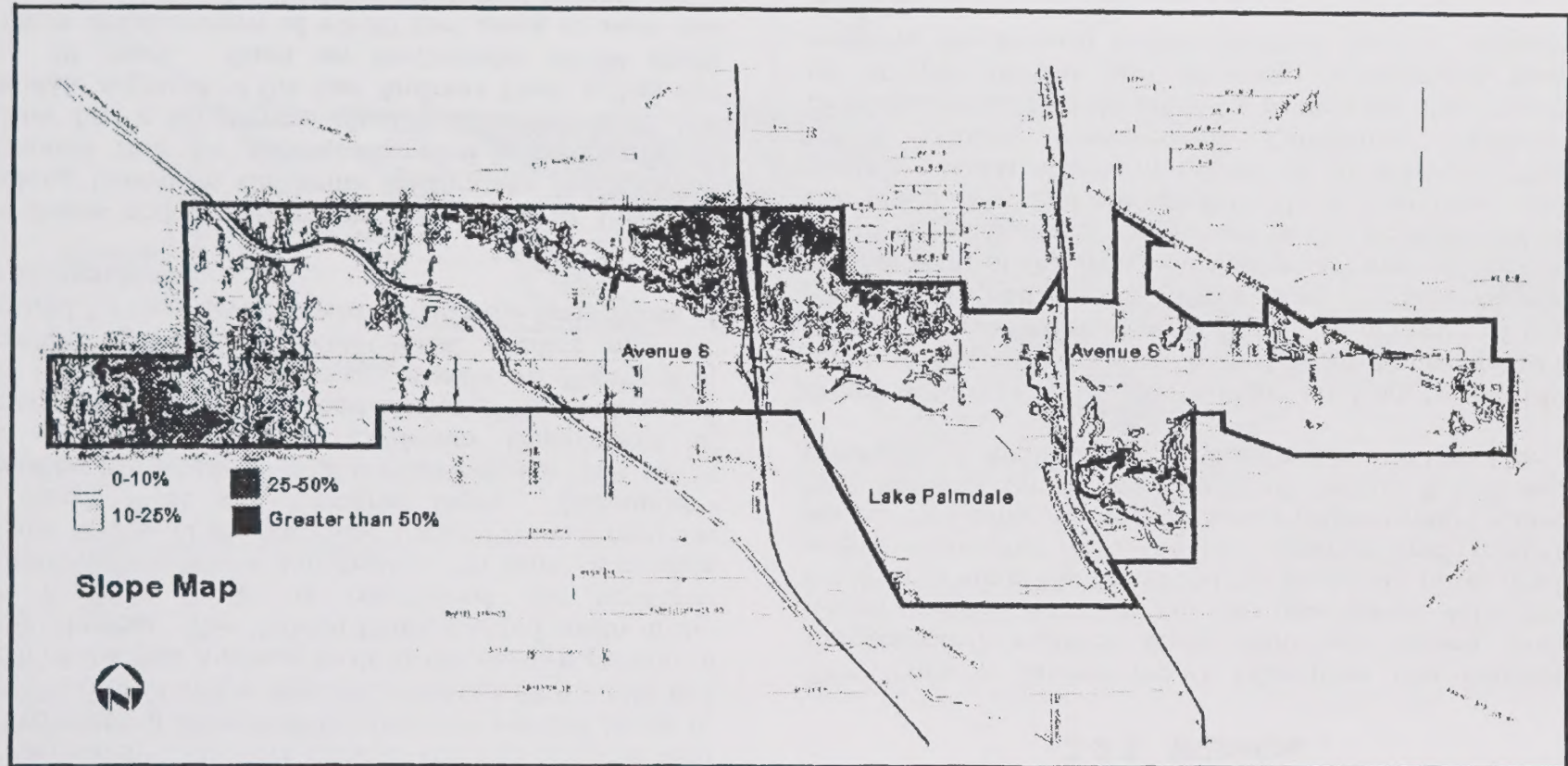


Figure 2-3: Slope Map

Source: Jones and Stokes

2.2.6 Noise

Noise within the study area is mainly generated by traffic on surface streets, the Antelope Valley Freeway and the Southern Pacific Railroad. According to the

General Plan Noise Element, as referenced in Jones & Stokes' report, the roadways that will generate the most traffic noise in the study area include Avenue S, Tierra Subida Avenue, Sierra Highway 5th Street East, 10th Street East, 20th Street East, and the Antelope Valley Freeway

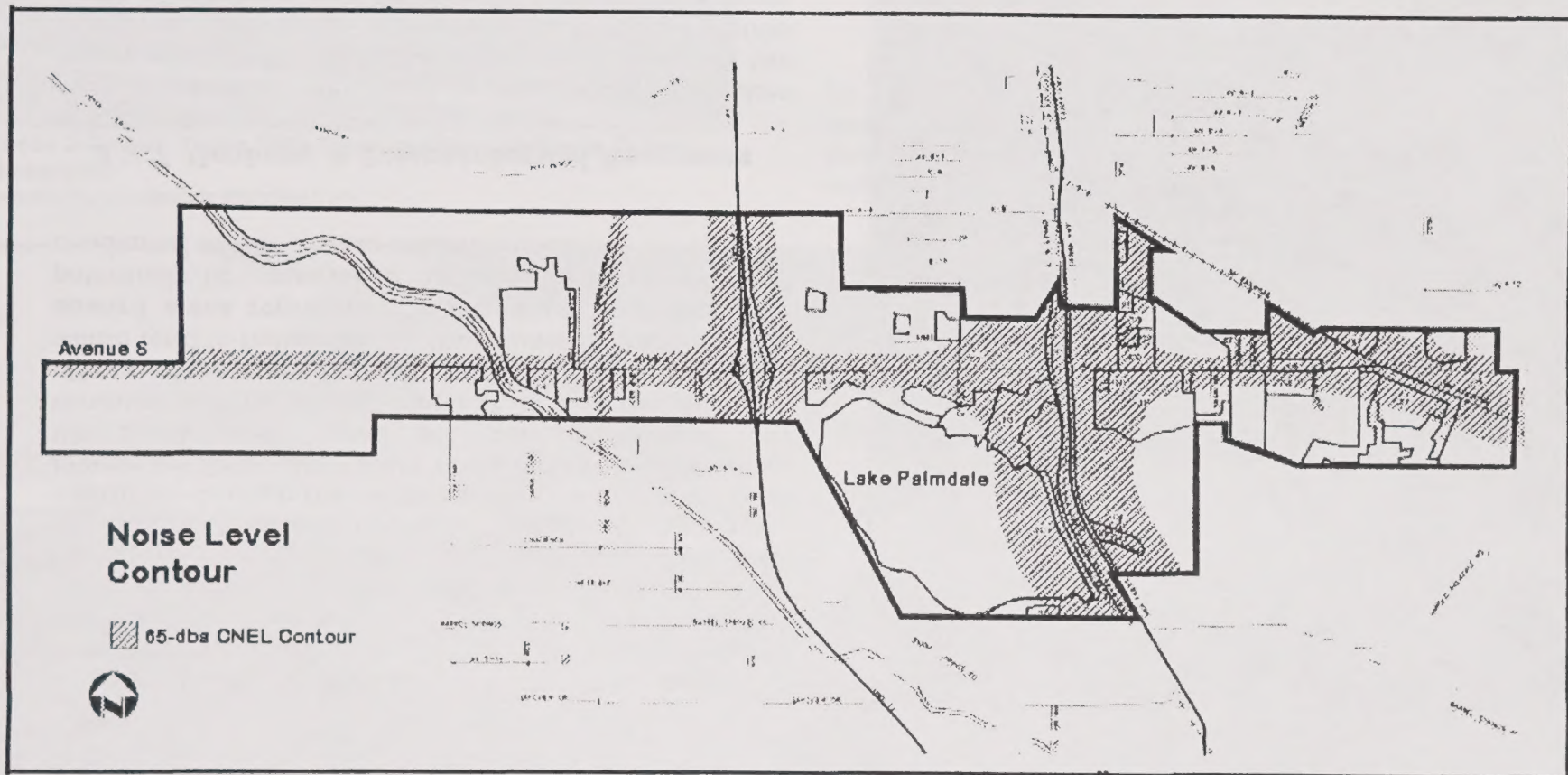


Figure 2-4: Noise Contours

Source: City of Palmdale General Plan

Train noise in the study area is presently generated from two rail lines operated by Union Pacific Railroad and the Metropolitan Transportation Authority. The Valley Mainline runs north and south adjacent to Sierra Highway. The Colton-Palmdale cutoff branches from the Valley Mainline south of Avenue R and runs southeast through the eastern portion of the study area. Figure 2-4 illustrates future noise level contours within the study area, based on year 2015 build out conditions. This exhibit does not include the shielding effects of intervening structures or landforms that would tend to reduce sound transmission, therefore, the shaded areas represent the maximum area that may potentially be constrained by noise for development of residential or other noise-sensitive uses.

2.2.7 Geologic & Paleontological Resources

Another resource described in the Jones & Stokes report is the geologic sedimentary units found in the study area that range in age from 6 million to 10,000 years before present. Of the eight different soil types identified in the study area, the Jones and Stokes report identified three soil formations which have the potential to contain paleontological resources (fossils): the Anaverde formation, the Harold formation and the Nadeau Gravel/Older Alluvium soils. These soils can contain fossilized bones of rabbits, lizards, mastodon, mammoth, and extinct camels and horses.

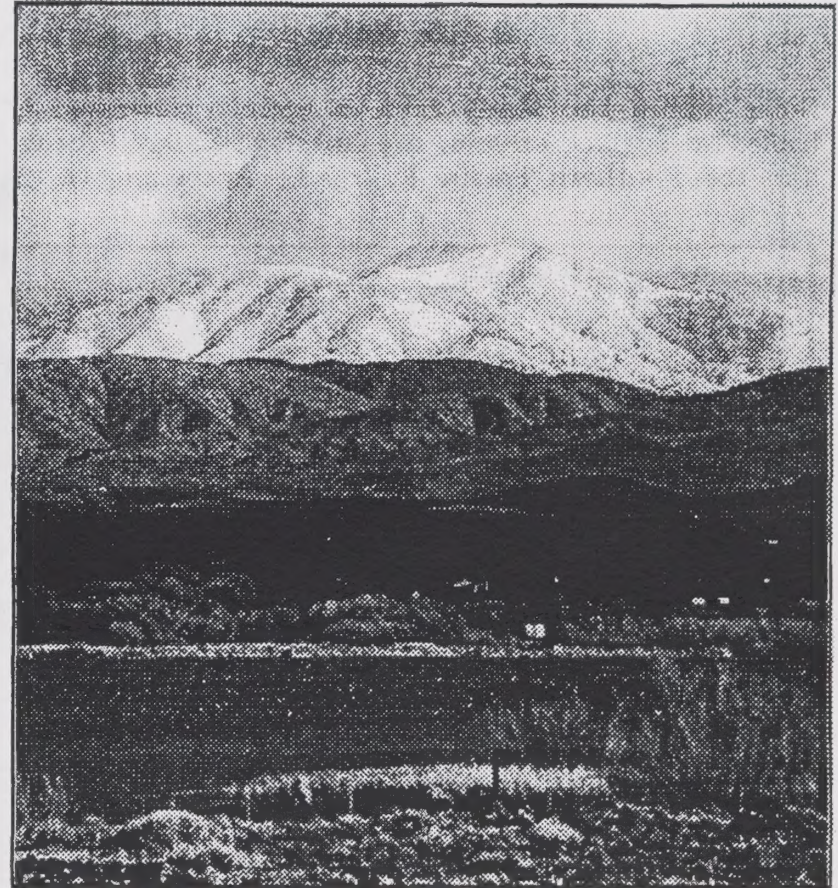


Photo 2-2: View of Lake Palmdale and San Gabriel Mountains

Source: City of Palmdale Planning Dept.



Photo 2-3: Ana Verde Hills Community and Sierra Pelona Mountains

Source: City of Palmdale Planning Dept.

The Jones & Stokes report states that geographic distribution of the study area's soils is influenced by the San Andreas and other faults in the area. As described above, the Avenue S Corridor study is crossed in three places by earthquake fault zones.

2.2.8 Scenic Views

As referenced above under the discussion of hillsides and geologic resources, the high mountain peaks and foothills located south and southwest of the study area and the unique geologic formations of the San Andreas



Photo 2-4: View of the Ana Verde Hills at the west end of the study area

Source: City of Palmdale Planning Department

Fault provide a visually interesting contrast to the desert floor and the developed areas in the eastern portion of the study area (see Photo 2 2, Photo 2 3, Photo 2-4 and Photo 2 5).

The City's General Plan Environmental Resources Element designates Tierra Subida Avenue and Sierra Highway south of Avenue S as scenic highways, both of which pass through the study area. In addition, the Los Angeles County General Plan has designated portions of the Antelope Valley Freeway within and adjacent to the study area as a scenic corridor. The Jones & Stokes report further states that "portions of these scenic



Photo 2-5: View of Una Lake from Sierra Highway

Source: City of Palmdale Planning Department

roadways approaching the study area from the south provide unobstructed panoramic vistas overlooking Lake Palmdale and Una Lake; and the entire valley including Palmdale, from the northwest to the east including distant hills and mountains.

These views can be seen from areas such as the Anaverde Hills area located south of the study area and from the Odett-Antelope Valley Vista Point, which is a designated scenic overlook area on the Antelope Valley Freeway south of the City near Courson Road. From areas within the Avenue S Corridor study area unobstructed views are provided of Anaverde Hills and the Sierra Pelona Mountains further southwest, and long-range views of the San Gabriel Mountains are visible to the southeast.

2.2.9 Health and Safety Risks

There is a 100-foot-wide pipeline easement containing two 30-inch diameter natural gas transmission pipelines located along the south side of Avenue S that run from the east boundary of the study area to a point west of Barrel Spring Road in the western portion of the study area; the easement then veers off the alignment of Avenue S and runs southwest toward Newhall. Figure 2 5 illustrates the location of the gas line easement and where it crosses the fault zones.

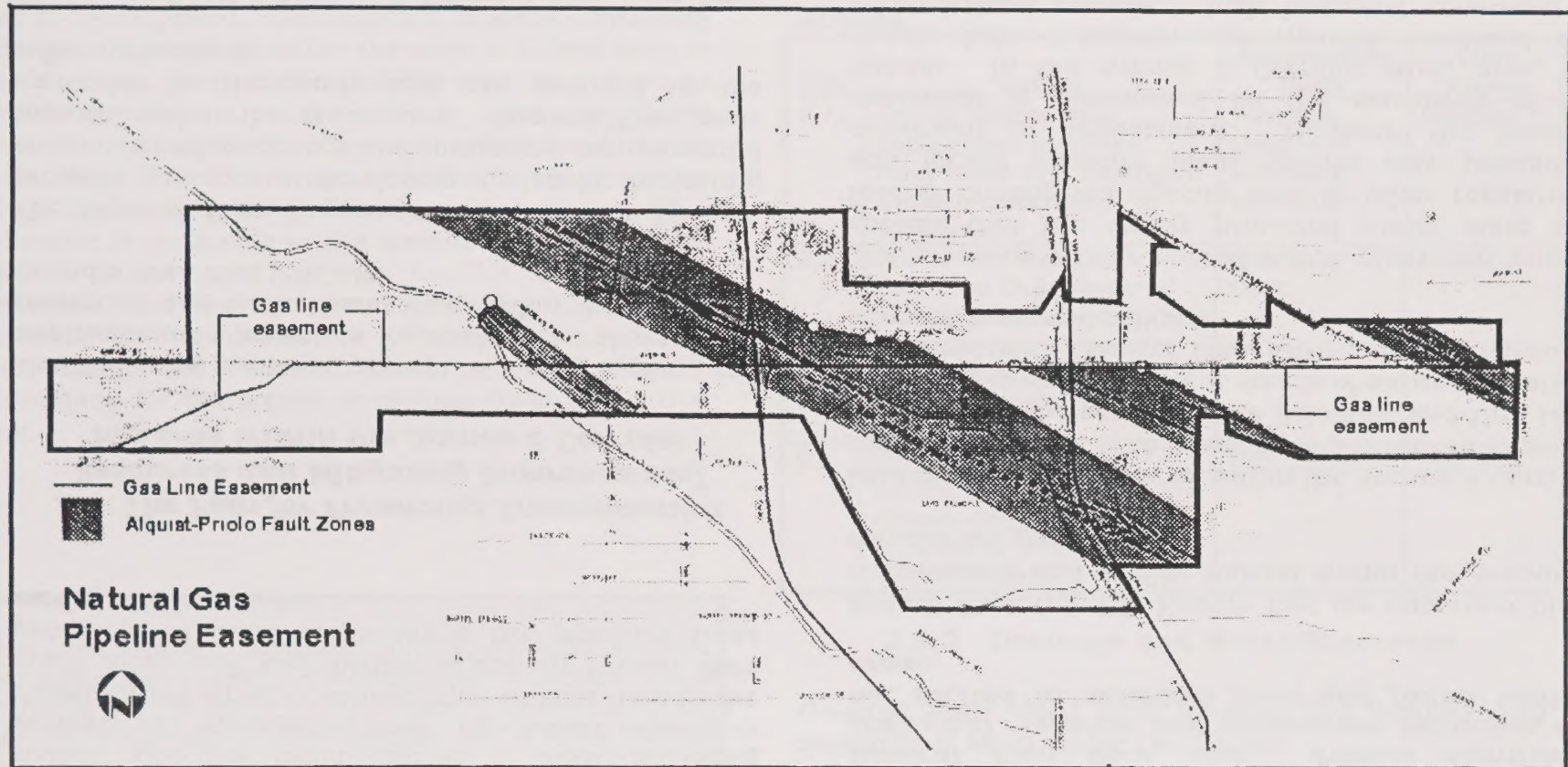


Figure 2-5: Location of the two high pressure natural gas pipelines, in relationship to the existing faults

Source: Jones and Stokes

Jones & Stokes reported that the gas pipelines run parallel to each other and are separated by an average distance of 20 to 25 feet, with approximately 35 feet between each line and the easement boundary. As described in a separate study prepared by Willdan

Associates, both pipelines are located below the ground surface at a depth ranging from three feet to over ten feet deep. According to this study, future widening of Avenue S will require that these pipelines be raised in three locations where significant grade changes will

occur as a result of street improvements. The gas line easement also crosses each of the fault zones that run through the study area.

According to the Jones & Stokes report, the pipelines present a potential public safety hazard because any break in the pipelines could result in a release of natural gas that could explode or burn, damaging property and endangering lives. This hazard factor may constrain the siting of certain types of land uses in the study area, and may further constrain certain uses proximate to those areas where the pipelines cross earthquake fault lines.

2.3 The Plan for Preserving Environmental Resources and Mitigating Environmental Hazards Within the Avenue S Corridor

The following sections present the City's plan and implementation measures for environmental resources protection and hazard mitigation within the Avenue S Corridor Area Plan (ASCAP).

The General Plan Environmental Resources Element provides guidance in developing a plan for protecting environmental resources and mitigating environmental hazards within the study area. General Plan goals applicable to the study area are included in the following sections.

Objectives for the Avenue S Corridor plan have been developed to further refine the implementation of these

goals within the corridor study area. The action statements give precise direction on how the broader goals and objectives are to be achieved.

2.3.1 Biological Resources

General Plan Goal ER2: Protect significant ecological resources and ecosystems, including, but not limited to, sensitive flora and fauna habitat areas.

ASCAP Objective E1. Ensure that the important plant communities and wildlife habitat within the Avenue S corridor are preserved.

Discussion: Development within the Avenue S Corridor can be planned in such a way as to protect the sensitive eco-systems surrounding Lake Palmdale and Una Lake and in areas with significant stands of native vegetation, consistent with General Plan Environmental Resource Element goals and policies.

The presence of any special-status plant and animal species that are legally protected under state and federal Endangered Species Acts or other regulations and locally sensitive plant species may present a constraint to development. However the level of constraint is determined by the sensitivity of the habitat. In the Avenue S Corridor study area, the ponds, Lake Palmdale, and riparian woodland and scrub habitat present a high biological constraint to development and site-specific studies would be required

prior to development. Development of areas containing endangered species on either the state or federal level or special-status plant and/or wildlife may be subject to special regulations and policies from applicable agencies. Likewise, the City has an adopted Native Desert Vegetation Preservation Ordinance which applies only to Joshua tree and California juniper species. This Ordinance is applicable to site specific development and requires preservation of two healthy Joshua tree specimens and two junipers for every gross acre proposed for development. Preservation includes incorporating the salvaged plant material into the landscaping for the project or moving them into a tree bank.

Actions:

Ref.	Action	Responsible Party	Time Frame
2.1.	Review development applications to ensure compliance with the Native Desert Vegetation Ordinance.	Planning Dept. and reviewing authority	Ongoing
2.2.	Coordinate with the California Department of Fish and Game and the Army Corps of Engineers to ensure that state and federally listed species are protected.	Planning Dept.	Ongoing
2.3.	On the Land Use and Zoning Maps, maintain low density designations adjacent to Una Lake and Lake Palmdale.	City Council	Ongoing

2.3.2 Drainage and Water Resources

General Plan Goal ER4 *Protect the quality and quantity of local water resources.*

ASCAP Objective E2: Protect surface water quality within Lake Palmdale.

Discussion: Existing drainage patterns within the study area do not present a significant constraint to development because all development within the City is required to contain any increases in either storm water or nuisance flows within their project boundaries. This

When I first came here there were quite a few antelope out west. Near Indian Water, there was a band of sixty antelopes. It is at the foot of the red-brown mountain east of Rosamond by Dry Lake. Then there was another band out around Muroc. I guess there were 75 or 80 in that bunch.

John Stuckey

Source: Antelope Valley Pioneers

is accomplished either through the construction of on site facilities, such as detention basins, or through connection to regional storm drain facilities.

Storm water flows occur following periods of heavy rain, when water flows off impervious surfaces such as roofs and driveways. Nuisance water is generated by activities like overwatering landscaping or washing down sidewalks. Both of these water sources have the potential to carry urban pollutants such as chemical pesticides, fertilizers, oils and heavy metals, which wash off of streets and down gutters. Therefore, these sources of water have the potential to contaminate drinking water supplies if they are not properly contained.

The City requires certain measures to capture and control nuisance and storm water flows; however storm water or nuisance flow runoff from certain facilities such as service stations or certain other commercial uses may still pose a threat to the quality of groundwater if contaminants are introduced to the soil.

The California Aqueduct and Lake Palmdale provide drinking water to Palmdale area residents. The Aqueduct is contained within a concrete channel and is therefore not at risk from ground source contamination, however Lake Palmdale could become contaminated by polluted surface water flows, sewage effluent or hazardous chemical leaks.

Palmdale Water District and current General Plan policy do not permit nuisance water to drain to the lake. In

order to ensure water quality sewage lift stations, storage of hazardous materials or waste and placement of underground fuel tanks in proximity to Lake Palmdale should be avoided. In addition, the use of drywells and private on-site sewage systems should be minimized around the lake. These measures would provide an opportunity to protect the quality of local water resources in accordance with General Plan Environmental Resource Element goals and policies.

Water resources pose relatively few constraints to potential development in the study area.

Actions:

Ref.	Action	Responsible Party	Time Frame
2.4	Coordinate with the Palmdale Water District to determine appropriate infrastructure and/or mitigation measures adjacent to the Lake and the Palmdale Ditch to protect water quality	Planning Dept.	Ongoing
2.5.	As development occurs, underground the Palmdale Ditch with reinforced concrete pipe to the satisfaction of the Palmdale Water District.	Palmdale Water District and reviewing authority	Ongoing

2.3.3 Cultural and Paleontological Resources

General Plan Goal ER7 *Protect historical and culturally significant resources which contribute to the community's sense of history.*

ASCAP Objective E3: Preserve the significant historical resources which are present within the Avenue S Corridor

Discussion: Exhibit 3.2 of the Environmental Constraints Analysis prepared by Jones & Stokes for the Avenue S Corridor Area Plan identifies areas having high, low and moderate potential for cultural resources within the study area. The presence of known cultural resources sites and sensitivity areas does not preclude development of the study area. For instance, areas of high sensitivity would require intensive on-site field surveys, whereas areas of low intensity would require less rigorous evaluations. If cultural resources are found on land proposed for development, appropriate mitigation, such as leaving the area as undisturbed open space or simply recording the find, will be required. The level of mitigation will be based on the significance of the site, its scientific importance, and its importance to the community. The significance of any cultural resources will be determined through the review process conducted under the California Environmental Quality Act, rather than through studies required as a condition of approval of a development.

Consistent with General Plan Environmental Resource Element goals, existing documentation that is available

regarding the early settlement of Palmenthal and the presence of the Palmdale Cemetery provide an opportunity to preserve a piece of the City's past (see Photo 2-6). The vacant land east of the cemetery is recommended to be developed as a passive open space park in which information would be provided to area residents on the early settlement of Palmdale. In addition, a streetscape design theme and architectural standards are proposed in Chapter 6 for commercially designated property within the Avenue S Corridor that are reflective of the architecture used during the early settlement of the City



Photo 2-6: Historic Cemetery located north of Avenue S, east of 20th Street East

Source: City of Palmdale Planning Dept.

Actions:

Ref.	Action	Responsible Party	Time Frame
2.6.	Where appropriate, require cultural resources surveys, prior to deeming a development application complete, to determine whether significant cultural resources will be affected by proposed development.	Planning Dept.	Ongoing
2.7	In the event that collection of cultural resources is recommended as mitigation for future developments, require a program for data recovery excavation and/or preservation of cultural resources pursuant to State law. When feasible, any artifacts collected within the Avenue S Corridor should be curated by the Antelope Valley Indian Museum.	Planning Dept.	Ongoing
2.8.	Investigate the process and feasibility of nominating the old Palmdale Cemetery and surrounding land as part of a historic district for listing in the National Register of Historic Places.	Planning Dept.	1998-2000
2.9	Investigate transfer of ownership of the Palmdale Cemetery and adjacent undeveloped property from Los Angeles County to the City of Palmdale.	Planning Dept.	FY98-99

Ref.	Action	Responsible Party	Time Frame
2.10.	Use open space area adjacent to the Palmdale Cemetery as a passive park, with trails, native landscaping, benches and interpretive signs describing the historical significance of the early settlement of Palmenthal.	Planning and Public Works Depts.	Following transfer of ownership

ASCAP Objective E4: Research and record any important fossil-bearing geologic sites within the Avenue S Corridor

Discussion: Three of the soil formations in the study area can support important fossil locations. The Jones and Stokes report contains an exhibit that demonstrates those areas where potential for paleontological resources are high. In these areas, additional site-specific study may be needed; however in general, the presence of these resources does not represent a constraint to development.

Actions:

Ref.	Action	Responsible Party	Time Frame
2.11.	Where appropriate, require paleontological surveys, prior to deeming a development application complete, to determine whether significant fossil locations will be affected by proposed development.	Planning Dept.	Ongoing

Ref.	Action	Responsible Party	Time Frame
2.12.	Where significant sites are identified, encourage their preservation in open space areas, or areas that are accessible for future scientific research.	Planning Dept.	Ongoing

2.3.4 Seismic and Geological Hazards

General Plan Goal S1. Minimize danger and damage to public health, safety, and welfare resulting from natural hazards.

ASCAP Objective E5: To the extent feasible, ensure that future development is designed to minimize human injury and loss of life, damage to structures, and impacts on the environment from hazardous materials or from seismic activity on the earthquake faults which cross the study area.

Discussion: Because of the potential for significant ground displacement during an earthquake, all uses, other than open space, located within active earthquake fault zones may be subject to possible health or safety concerns in the event of an earthquake. Current State law places restrictions on types and uses of structures that can be constructed near active faults. Adoption of the Avenue S Corridor Area Plan will provide an opportunity to comply with General Plan Land Use Element policy that requires land uses to consider constraints such as earthquake fault zones in development of the land use plan.

In an effort to minimize injury and damage, General Plan policy L1 4.2.(b) limits residential density to no more than three dwelling units per acre within active fault zones. In addition, certain high-density and high-risk uses should be further limited in these areas. In an effort to reduce the likelihood of environmental damage, personal injury and property damage caused by soil, air or ground water contamination, fire or explosion within earthquake fault zones within the Avenue S Corridor it is recommended that all new uses proposing to utilize hazardous materials at the California Threshold Reporting Quantities* be reviewed by the City on a case by case basis. This precaution would affect much of the undeveloped land between the freeway and 5th Street East. It is also recommended that commercial buildings be limited to no more than .5 floor area ratio (FAR) for properties between fault zone boundaries in order to minimize building area and potential injuries and property loss within these zones. Current Zoning Ordinance regulations allow floor area ratios for commercial zones ranging from .5 to 1 FAR.

Actions:

Ref.	Action	Responsible Party	Time Frame
2.13.	Within the Ave. S Corridor restrict non-residential floor area ratios (FAR) within the Alquist-Priolo Earthquake Fault Zone to a maximum of .5 FAR.	Reviewing Authority	Ongoing
2.14	Within earthquake fault zones, require proponents of new uses handling	Reviewing Authority	Ongoing

	hazardous materials which require reporting under California Threshold Reporting Quantities* to prepare and submit documents for environmental review which may include preparation of focused studies to address risk hazards associated with such use, as deemed necessary by the Director of Planning.		
2.15.	Review development applications to ensure that they conform with General Plan policies concerning development density and land use constraints.	Planning Dept., Engineering Division and reviewing authority	Ongoing

*Threshold Reporting Quantities are quantities which at any one time is equal to or greater than a total weight of 500 pounds, or total volume of 55 gallons, or compressed gas having volume of 200 cubic feet at standard temperature and pressure.

ASCAP Objective E6: Ensure that development in the Avenue S Corridor is protected to the extent feasible from other geologic hazards.

Discussion: The geology and geomorphology of the planning area are complicated because of faulting; however from a land use perspective, these issues do not present a constraint since they can be identified prior to or during grading and mitigated. The Jones and Stokes report identified the possible geologic hazards which affect the Study Area as soil erosion, slope

instability hydrocompaction and expansive soils. These conditions are not uncommon in Palmdale and can generally be remedied through grading and engineering techniques.

Actions:

Ref.	Action	Responsible Party	Time Frame
2.16.	Require soils and/or geo-technical reports as part of the development application for future projects within the study area where warranted by preliminary geological investigation.	Planning Dept. and Engineering Div	Ongoing

2.3.5 Hillsides and Views

General Plan Goal ER3: *Preserve designated natural hillsides and ridgelines in the Planning Area, to maintain the aesthetic character of the Antelope Valley.*

ASCAP Objective E7 Ensure that where hillside development occurs along the Avenue S Corridor it is consistent with the grading standards outlined in the Hillside Management Ordinance.

Discussion: The City's General Plan and Zoning Ordinance contain many policies and criteria which encourage the preservation of the mountain ridge and natural hillsides located within the City by limiting the density or intensity of use as slopes become steeper

For instance, the siting criteria in the Zoning Ordinance preclude development of commercial and industrial uses on hillside slopes of 15 percent or greater. Additionally, the Zoning Ordinance requires a reduction of residential density on slopes greater than 10 percent, and the density reductions increase as the steepness of the slope increases. Therefore, hillsides may present a constraint to commercial, industrial and higher density residential development within the study area. Where development in hillside areas is permitted, the Hillside Management Ordinance requires the use of grading techniques that blend with the natural terrain and which minimize visual impacts of large cut and fill slopes.

Action:

Ref.	Action	Responsible Party	Time Frame
2.17	Require compliance with the City's Hillside Management Ordinance for all properties with slopes greater than 10%.	Planning Dept. and Engineering Div and reviewing authority	Ongoing

ASCAP Objective E8: Preserve significant views of Lake Palmdale, Una Lake and of the nearby mountains.

Discussion: Related to hillsides and their naturally higher elevations are the viewsheds they provide. The Avenue S Corridor Area Plan provides an opportunity to protect scenic views both to and from the City. These views provide an opportunity to emphasize two major gateways into the City: the Antelope Valley

Freeway/Avenue S and the Sierra Highway/Avenue S intersections. Entry statements to the City can be accomplished through monument signs and landscaping at these intersections that let motorists know they have "arrived." A number of other methods can be used to preserve views for both motorists and for residents within these areas. For example, Jones and Stokes' report recommends techniques including building placement, and building height restrictions near the Avenue S/SR 14 and Avenue S/Sierra Highway interchanges.

The approach to the city from SR 14 features Lake Palmdale as a unique visual element. Maintaining open areas and view corridors around the lake will help to preserve this impressive view.

On the other hand, views of the landfill located north of the Avenue S Corridor study area can negatively affect residential development if adequate buffering is not in place. Buffering can include intervening land uses such as business park or office buildings between the landfill use and residential uses. Another method would be the use of landscaping to provide a visual screen between residential uses and the landfill.

Actions:

Ref.	Action	Responsible Party	Time Frame
2.18.	Require project-specific visual analysis on projects with slopes greater than 10% or adjacent to Lake Palmdale or Una Lake.	Planning Dept.	Ongoing

Ref.	Action	Responsible Party	Time Frame
2.19	Establish design criteria for development adjacent to Lake Palmdale and Una Lake to ensure that lake views are maintained.	Planning Dept., Planning Commission & City Council	See Action Ref. 6-3.
2.20.	In reviewing development plans within the planning area, seek to maintain view corridors along Avenue S to preserve views of the San Gabriel and Sierra Pelona Mountains.	Planning Dept. and reviewing authority	1998
2.21.	Implement the proposed streetscape, median and gateway area landscape designs, as shown in Chapter 6, along Avenue S.	Public Works Dept.	1998 and ongoing

ASCAP Objective E9: Designate significant viewsheds within the Avenue S Corridor as scenic areas on the City's General Plan.

Discussion: Currently the City has designated Sierra Highway south of Avenue S and Tierra Subida Avenue as scenic highways under the Environmental Resources Element of the General Plan. Los Angeles County has designated the portion of the Antelope Valley Freeway south of Palmdale Boulevard as a scenic resource in its General Plan. In order to preserve views of Lake Palmdale, desert buttes and surrounding hillsides, the Antelope Valley Freeway should also be considered a

scenic view corridor on the City's General Plan. This designation would also provide consistency between the two jurisdictions.

Actions:

Ref.	Action	Responsible Party	Time Frame
2.22.	Amend the Environmental Resources Element of the City's General Plan to designate State Route 14 south of Palmdale Boulevard as a scenic highway	Planning Department, Planning Commission and City Council	FY 1998-99

2.3.6 Noise

General Plan Goal N1. *Minimize the exposure of residents to excessive noise to the extent possible, through the land planning and the development review process.*

ASCAP Objective: E10: Ensure that sensitive land uses are adequately buffered from the noise sources along the Avenue S Corridor

Discussion: Residential uses are considered the most sensitive to noise sources and the General Plan specifies maximum exterior noise levels for residential uses as 65 CNEL. Based on California Department of Health Guidelines, 60 CNEL or less is considered to be a normally acceptable noise level. Minimizing residential density near areas of anticipated higher noise levels as reflected on Figure 2-4 will reduce the exposure of residents to excessive noise, in accordance

with the goals contained in the General Plan Noise Element. Acceptable noise levels for commercial development are generally measured within the interior of buildings.

The Jones and Stokes report recommends incorporation of earthen berms, sound reducing walls, increased setbacks, and building orientation to reduce noise impacts. Other methods that could be used include enhanced construction materials and limiting residential densities to expose fewer residents to high noise levels. It is recommended that the use and location of berms and walls also ensure that visual resources are not impacted. Review of future single family residential development within the noise contours depicted on Figure 2-4 should include preparation of a project-specific noise study which would identify appropriate noise mitigation methods.

Actions:

Ref.	Action	Responsible Party	Time Frame
2.23.	Review development applications to ensure that appropriate noise mitigation measures are incorporated into the project design.	Planning Dept. and reviewing authority	Ongoing
2.24	Where noise attenuation walls are proposed, ensure that they are consistent with the streetscape design guidelines described in Chapter 6.	Planning Dept. and reviewing authority	Ongoing

2.3.7 Natural Gas Pipelines

General Plan Goal S2: Minimize damage associated with man-made hazards.

ASCAP Objective E11. Ensure that future development is adequately protected from the hazards associated with the two existing high pressure natural gas pipelines that pass through the study area.

Discussion: The presence of the natural gas transmission main pipelines may be limiting factors in land use planning due to safety concerns. Planned land uses must take into consideration the potential for the gas line to rupture and ignite. Therefore, high density and sensitive land uses, such as apartment complexes, shopping malls, high density office buildings and schools and hospitals are not recommended in close proximity to the pipelines.

Where the gas lines cross the fault zones, there is a higher level of risk than in other areas along the pipelines (see Figure 2 5). In portions of the study area where fault zones are a constraint, additional building setbacks beyond those required from the existing Gas Company easement should be incorporated into development projects.

General Plan policies require that all development adjacent to the gas lines be adequately buffered from the lines and provide alternative access/evacuation routes to provide protection in the event of a gas line rupture or leak.

Actions:

Ref.	Action	Responsible Party	Time Frame
2.25.	Ensure that adequate buffering and alternative means of access are provided for all new development adjacent to the gas lines.	Planning Dept. and reviewing authority	Ongoing
2.26.	Review future development applications to ensure that adequate setbacks from the gas line easements are provided.	Planning Dept.	Ongoing
2.27	Coordinate with the Gas Company on all development projects adjacent to their easement to ensure that access and infrastructure designs will not interfere with the operations or the integrity of the gas lines.	Planning Dept. and Engineering Division	Ongoing

3. Chapter 3 Land Uses Within the Avenue S Corridor

3.1 Why Amend the Existing Land Use Designations within the Avenue S Corridor?

Anyone traveling along Avenue S through the planning area will note a mix of vacant land and property with a wide variety of uses—residential subdivisions, vacant parcels, and steep, undeveloped hillsides, apartment complexes, medical offices, a mobile home park, and a mini warehouse. This type of development, where a variety of uses are interspersed with vacant land, is not unique to the Avenue S Corridor. It can be found along many streets in Palmdale, as well as in most growing communities in the region. As common as it is, this development pattern represents both a challenge and an opportunity in planning for an area, because it adds a layer of complexity to the planning process. The Avenue S Corridor is not a blank slate, on which planners need not consider what has come before. On the contrary, this corridor has a rich history and contains natural and man-made features that are important to the whole community.

Of the approximately 1840 acres of land within the planning area, 670 acres, comprising 36 percent of the area, have been developed with commercial, residential or public uses (see Table 3-1). The remaining 1170 acres, equaling 64 percent of the planning area, lie vacant. Photo 1.1 in Chapter 1 provides an aerial view

of the planning area, indicating the existing pattern of development. The developed properties within the Planning Area support uses which include single family houses, apartments, mobile homes, a gas station, small retail stores, park and rides, the cemetery water tanks and the water treatment plant, and an abandoned hospital. Most of these developed properties are located east of the Antelope Valley Freeway where flatter land and infrastructure are available; on the west end of the planning area, vacant land predominates.

The successful blending of old and new development to create a street along which land uses transition naturally and logically is central to the land use component of this Area Plan. It is the City's goal to create a plan which ensures that land uses throughout the Avenue S Corridor are appropriately designated, in consideration of existing development patterns and environmental and infrastructure constraints, and that future development is supported by a well-designed circulation network, and adequate sewer and water systems.

Previous planning efforts for this area are contained in the City's General Plan, adopted in 1993, and the Palmdale Park South Specific Plan, adopted in 1987 which covers approximately 152 acres on the east end of the planning area. Through the General Plan process, a broad range of land uses were designated throughout the planning area (see Figure 3-1)

Residential densities within the planning area range from one dwelling unit per acre to up to 16 dwelling units per acre, and on the east side of the freeway four different commercial and industrial land uses can be found. On the west side of the freeway a “place-holder” designation (Special Development—SD) was applied to the properties within the planning area, pending further focused study of this land. Pursuant to General Plan Policy L7 1.9 the SD designation calls for focused planning efforts, “beyond the level of detail normally associated with the General Plan” to address infrastructure, topography environmental sensitivity and development constraints. This need is fulfilled in the Avenue S Corridor Area Plan, since the Plan addresses appropriate land use designations, environmental constraints and infrastructure and circulation needs.

Through this comprehensive planning process for the Avenue S Corridor an extensive amount of information regarding the opportunities and constraints for properties throughout the planning area was collected, providing an understanding of the area which was not previously available. As described in Chapter 2, the corridor is environmentally complex, with seismic and topographic constraints, and it possesses resources that warrant protection, particularly the water supply in Lake Palmdale and the spectacular views both to and from the planning area. In Chapter 5, the difficulties in providing infrastructure to all properties within the planning area are described, providing yet more information on which to base land use decisions. The synthesis of this information concerning the planning

area’s physical, environmental and social conditions is the basis for the land use plan presented in this chapter

In the following section, “Existing Conditions, Opportunities and Constraints, a look at the effect of General Plan policies on land uses and development potential within the corridor is provided. Following that is an assessment of the existing development in the corridor and the issues and opportunities associated with that development. Vacant land and its potential for development, in light of the environmental considerations expressed in Chapter 2 and infrastructure issues described in Chapter 5, are covered, and a matrix which summarizes these opportunities and constraints completes Section 3.2. Based on the analysis contained in Section 3.2, a plan for land uses is presented at the end of the Chapter

3.2 Existing Conditions, Opportunities and Constraints

In order to set the stage to discuss the planning area’s land use issues, a brief discussion of the existing land use plan and General Plan policies which affect the planning area is provided below. Following that discussion is an analysis of both the existing development within the planning area, as well as of the significant development projects adjacent to the planning area which will influence Avenue S Corridor land use decisions. Finally a discussion of the vacant land within the planning area is provided, and a matrix

which summarizes all of these issues completes this section.

3.2.1 Existing General Plan

The City's current General Plan was adopted in 1993, establishing a framework for development throughout the City as well as within the Avenue S Corridor. Since its adoption, the General Plan has been amended many times, in order to keep the plan current with the needs of the community. The planning process that is being undertaken for the Avenue S Corridor is similar to the process that occurred when the General Plan was adopted, only for a smaller area and at a more precise level of detail. The intent, however, is not to replace the General Plan through this effort, but to use the guidance contained in the General Plan's goals, objectives, policies and plans, in conjunction with the extensive amount of information now available for the Avenue S Corridor to create a plan which refines and enhances the General Plan. The land use designations which will be recommended in this plan will match those used elsewhere in the City. A brief description of these land uses is provided in Table 3-2.

The Land Use Map and the goals, objectives and policies contained in the nine General Plan Elements will influence future development within the planning area. These components, and their impact on the land within the Avenue S Corridor are described below.

3.2.1.1 Existing Land Use Plan

Figure 3-1 depicts the existing land use designations and Table 3-1 provides a break down of their current distribution within the planning area. As shown on this exhibit and in this table, with the exception of the west park and ride which is designated as PF (Public Facilities), all properties west of the freeway totaling 756 acres, are designated as SD (Special Development). East of the freeway several different land use designations can be found. Because issues regarding the existing Land Use Plan are different between the east and west of sides of the freeway the two areas are discussed in separate subsections.

Table 3-1

Distribution of Existing Land Uses within the Avenue S Corridor

Land Use	Acres	Percent of Study Area
Low Density Residential	43	3%
Single Family Residential	260	14%
Multi-family Residential	133	7%
Commercial/Office	133	7%
Public Facilities	420	23%
Business Park	97	5%
Special Development	754	41%
Total	1840	100%

Source: City of Palmdale Planning Dept.



Table 3-2

Summary of General Plan Land Use Designations

Land Use	General Plan Description
Equestrian Residential	Equestrian Residential (ER) designation is intended for single family residential uses at a maximum gross density of 40 dwelling units per acre (1 unit per 2-1/2 acres). Equestrian and related animal keeping activities are permitted within this designation. Public improvements for streets and street lighting may be constructed to rural design standards; these may include rolled curbs, dirt shoulders and lighting only at intersections. In order to promote development of a comprehensive trails system, easements for backbone and feeder trails located along streets may be used in calculating required lot area.
Low Density Residential	The Low Density Residential (LDR) designation is intended for single family residential uses at a maximum gross density of one dwelling unit per acre. Minimum lot sizes for land divisions within this designation will generally be one (1) acre or larger although clustering may be permitted to promote preservation of natural resources, steep slopes and significant viewsheds. Easements for feeder trails may be used in calculating required lot area. Land divisions which propose direct driveway access to arterial streets is not permitted.
Single Family Residential-2	The Single Family Residential-2 (SFR 2) designation is intended for single family residential uses with gross densities ranging from 0-3 dwelling units per acre. This designation is consistent with current General Plan policies for areas affected by earthquake fault zones and is also appropriate in areas between the valley floor and steeper hillsides. Land designated as Single Family Residential 2 would permit lot sizes a minimum of 10,000 square feet in size and full urban services, including community water and public sewer are required within areas containing this density
Single Family Residential-3	The Single Family Residential-3 (SFR 3) designation is intended for single family residential uses with gross densities ranging from 3.1-6 dwelling units per acre with full urban services.
Multi-Family Residential	Multi-Family Residential (MFR) designations are intended for residential development with density ranging from 10.1 16 dwelling units per acre. The 308-unit Mountain Shadows apartment complex located on 19 acres on the south side of Avenue S between 10 th Street East and Casa Verde Drive contains this land use designation.
Neighborhood Commercial	The Neighborhood Commercial (NC) designation provides for convenience type retail goods and personal services designed to serve the daily needs of nearby neighborhoods and commuters utilizing Avenue S.

Land Use	General Plan Description
Community Commercial	The Community Commercial (CC) land use designation is intended for businesses providing a greater range of merchandise in shopping goods and draws its customers from a longer distance than a neighborhood commercial center
Office Commercial	The Office Commercial (OC) designation is designed to accommodate a variety of professional office uses. Limited retail, service, child care and eating establishments may be permitted to support the primary office users provided they do not detract from the professional office uses. The Office Commercial land use responds to opportunities for growth in these fields as well as commercial uses such as restaurants and limited retail uses in areas of the City where backbone infrastructure is currently available.
Public Facilities and Open Space	The (PF) designation is designated for land which is or will be utilized for various types of public and quasi-public uses such as parking lots, water and sewer treatment plans, cemeteries, schools, and police and fire stations. Areas designated as Open Space (OS) on the General Plan Land Use Map are intended to reserve land for both natural and active open space uses, including City parks. Existing community facilities within this area are shown on Exhibit 3-2.

Source: City of Palmdale General Plan

West of the Freeway As stated in General Plan Policy L7 1.9 the Special Development (SD) designation calls for extensive analysis in the form of a comprehensive plan, such as the Avenue S Corridor Area Plan, in order to determine appropriate land uses. When the General Plan was adopted, several areas were designated as SD because they lacked infrastructure and possessed certain physical development constraints such as hillside areas and fault zones. Since the adoption of the General Plan in 1993, most of the areas which were previously designated SD have been amended on the General Plan Land Use Map to a low density residential land use, usually LDR (Low Density Residential, one dwelling unit per acre). The western portion of the Avenue S area, and an area in the southeast portion of the City which is the subject of a Specific Plan

application, are the only areas which remain designated SD

Along with the designation of SD the General Plan contains a policy which describes site-specific planning guidelines for the west end of the planning area. Policy L7 1 11 provides an extensive list of reports and analyses which need to be conducted, before development can occur on the SD properties.

This policy anticipated that property owners and developers would prepare these analyses. However since the City has taken on this planning effort, two of the studies called for—financing options for infrastructure and market analysis for commercial development—are only generally discussed in this report. These studies have not been conducted as a

part of the Avenue S Corridor Area Plan because it is not the City's intent at this time to require the formation of any assessment district to finance infrastructure improvements, and commercial marketing studies are dependent on specific commercial uses, which have not yet been identified. The financing and market demand studies will be important when future development is proposed in the planning area, and therefore it is recommended that future project applicants submit these analyses with their development applications. All other issues discussed by this policy such as infrastructure, circulation and land use, are thoroughly addressed in the Avenue S Corridor Plan.

East of the Freeway East of the freeway a variety of land use designations can be found. Near the freeway parcels both north and south of Avenue S are designated for Business Park (BP) uses (see Figure 3-1). These parcels are adjacent to Lake Palmdale and on the hillside areas north of Avenue S. As with the SD area, a number of site specific policies can be found in the General Plan which influence future development of these sites (Policies L7 1.1 and L7 1.3).

Moving eastward, a strip of properties north of Avenue S are designated for Community Commercial (CC) and Industrial (IND) uses. The property including and surrounding Lake Palmdale is reserved for Public Facilities (PF) uses. At the intersection of Sierra Highway and Avenue S, more commercial land can be found, adjacent to properties designated for Medium Residential (MR), Multi-family Residential (MFR) and Public Facilities (PF)(see Figure 3-1).

The commercial land currently designated on the Land Use Plan (133 acres or 7% of the planning area) does not appear to be well placed to serve either nearby residents or commuters using Avenue S. The designation of a long strip commercially designated land along Avenue S is not consistent with General Plan policy L4.2.1 which calls for the creation of commercial nodes, rather than developing commercial uses in long continuous strips. Therefore, the modification of the present distribution of land designated for commercial uses is recommended.

Approximately 152 acres of land on the east end of the planning area is designated as Palmdale Park South Specific Plan (see Figure 3-2, subareas 14 and 15). This Specific Plan was adopted in 1987 and provides for a commercial parcel along Avenue S and over 500 single-family residences south of the railroad. The commercial parcel has never been constructed, nor have approximately 100 of the single family houses which were envisioned by the Specific Plan. In reviewing the Specific Plan document, most of the development standards defer to the City's Zoning Ordinance, and those that do not are no longer consistent with current standards permitted elsewhere in the City. The permitted commercial uses are so limited as to restrict most development opportunities on the commercial parcel. Therefore, through this planning effort, the Palmdale Park South Specific Plan will be eliminated, and the portion of the Specific Plan area previously identified as residential will be redesignated as SFR 3 (Single-Family Residential 3.1-6 dwelling units per acre) and the commercial portion will be redesignated as OC

(Office Commercial). This action will maintain the intent of the development concept set forth in the Specific Plan, but will eliminate the intermediate layer of regulations from the development review process.

3.2.1.2 Existing General Plan Policies

Although all General Plan policies are applicable to the planning area, there are a number of policies which will have a great influence on the proposed land uses within the planning area. The complete text of all applicable General Plan policies is provided in Appendix A, however a brief discussion of several of the most relevant policies is provided below

Policy ER4 1.4 and Policy PS2.2.4 require that all non-residential uses, and residential uses on lots of less than one acre, connect to public sanitary sewers.

Policy L4.2.2 provides siting criteria for commercial uses, recommending one-half to one mile spacing between various types of commercial development.

Policy L5.2.6 recommends against development of industrial uses on areas with significant topographic constraints and hillside areas.

Policy L1 4.2. limits residential density on properties within the Alquist-Priolo Earthquake Fault Zones to no more than three units per acre.

Policy L3.4.3 recommends that where prevailing existing development consists of rural residential, designation of higher residential densities nearby should be avoided.

These policies, along with the information contained in the following sections, will influence future land uses and development within the planning area. Before the City Council can approve the proposed land use plan contained in this Chapter they will need to determine that the land use plan, as well as the entire Area Plan, is consistent with the City's General Plan. Therefore, any proposed land use must conform to all the policies contained in the General Plan.

3.2.2 Existing Development

Existing development plays an important role in evaluating future land uses within the planning area, because it sets a precedent that is difficult to modify. Existing developments set parameters for type and intensity of use, setbacks and site design, building detail, and value of materials, among other things. The effects of the existing development on the Avenue S corridor are discussed in the following paragraphs.

Approximately 670 acres, or 36 percent of the planning area, have been developed. The distribution of developed land uses is provided in Table 3-3, which shows that most of the development that has occurred in the planning area consists of public uses. Although in the City as a whole, land designated for public uses represents only a small percentage of the total land

area, the Avenue S Corridor contains a much higher percentage because of the property owned by Palmdale Water District. The District's tanks, treatment plant and Lake Palmdale property comprise the bulk of the developed public uses in the planning area (for purposes of this analysis, Lake Palmdale is considered to be developed, even though it functions visually and biologically as natural open space). Single family residential development comprises another large portion (27 percent) of the development along the corridor

Table 3-3

Existing Development in the Avenue S Corridor

Land Use	Acres	Percent of Developed Land
Single Family Residential	181	27%
Multi-family Residential	56	8%
Commercial/Office	13	2%
Public Facilities	420	63%
Total	670	100%

Residential Development. Residential development, which comprises 27 percent of the developed land within the Avenue S Corridor ranges from large, one-acre lots west of the freeway to mobile homes and apartments between 10th Street East and Casa Verde, south of Avenue S. This range of housing types provides for a variety of housing opportunities, but it also can contribute to land use interface issues.

For example, the Rolling Hills Estates mobile home park and the Mountain Shadows Apartments located to the east are situated within or adjacent to the Alquist-Priolo

Earthquake Fault Zone associated with the San Andreas and Little Rock Faults. As explained in Chapter 2, this zone delineates areas within which special care must be taken to avoid seismic risks. General Plan Policy L1 4.2 calls for limiting the development density within this zone to a maximum of three units per acre. This means that future development south of the mobile home park and apartments will be at a much lower density than are currently found on the developed properties to the north. Care will need to be taken to ensure that future development south of the mobile home park and apartment properties is designed to provide appropriate setbacks, landscaping, fencing and other types of buffers to accommodate the existing higher density land uses.

The mobile home park, because it falls within the Alquist-Priolo Earthquake Fault Zone, is now inconsistent with Policy L1.4.2, since it has a density of six units per acre, twice the density called for by this policy. If the property was redesignated to SFR 2, with the associated zoning of R 1 10,000 the mobile home park would be considered a legal non-conforming use, which would limit certain opportunities to expand or improve the existing park facilities. Notwithstanding Policy L1 4.2, General Plan Policy L3.3.4 recognizes the need to preserve existing mobile home housing opportunities, and conversion of mobile home parks to different uses is a complex and costly process for both park owners and residents. Therefore, no change in the existing MR (Medium Residential) land use designation is proposed in this plan.

On the east end of the planning area, east of 10th Street East, over 500 single family homes have been developed. Because certain uses can impact negatively on the quality of a neighborhood, particularly industrial and intensive commercial uses, the presence of these homes will limit the range of land uses which can be applied to adjacent vacant properties. Therefore, the existing houses in the planning area will act as a land use constraint for certain types of future development within the planning area.

Commercial Development. Commercial development within the planning area has been limited to date. As shown in Table 3-3, only 13 acres, or two percent of the planning area, have been developed with commercial uses.

Currently the only retail use within the planning area is a one-acre strip mall, with a gas station/convenience store and several retail store fronts. This site is located at the southwest corner of Avenue S and Sierra Highway backing up to the Union Pacific Railroad right of-way (see Figure 3-2, subarea 9). Because of its location along major arterial roadways and the railroad track, this small center will not adversely impact development in the immediate area; however because it provides commercial services, its presence will influence the location of other similar commercial uses in other portions of the planning area because they will be subject to the commercial spacing criteria contained in the General Plan. Therefore, development of a commercial node at the Avenue S and Sierra Highway

intersection could preclude the designation of similar commercial land uses within a one-half mile radius.

This strip mall is located in unincorporated Los Angeles County and it was approved for development by the Los Angeles County Regional Planning Commission, whose requirements and standards for development are not the same as the City's. For example, although a trunk sewer line is located nearby in 10th Street East, the County allowed this commercial development to utilize a private septic system to handle wastewater rather than requiring connection to a public sanitary sewer. A second gas station was approved by the County at the northeast corner of Avenue S and the freeway which was also allowed to install a private septic tank; however construction of this development approval never commenced and the County's approval has expired. These examples of inconsistent standards and requirements demonstrate the need for annexation of the unincorporated portions of the planning area into the City of Palmdale, in order to ensure that future development conforms with the requirements and standards set forth in the City's General Plan, Zoning Ordinance, and the Avenue S Corridor Area Plan.

A mini-storage facility is located at the northeast corner of Avenue S and 10th Street East (see Figure 3-2, subarea 8). This property was originally developed in 1981 and has been expanded since that time; various features of the facility are not in compliance with current zoning regulations. However the property located along a major and secondary arterial, could transition to a different commercial use or remain, with

certain upgrades, as a mini-storage facility without causing undue impact on existing or future surrounding land uses; therefore, no change in that parcel's land use designation is proposed. The property owners are working to bring this use into conformance with applicable standards.

Farther east on Avenue S are two medical office buildings, adjacent to the now vacant Desert Palms Hospital facility (see Figure 3-2, subarea 10). These medical office buildings, which provide offices for about a dozen physicians, are surrounded by developed properties, with the hospital buildings to the south and west and apartments to the east. No land use impacts or issues associated with these offices have been identified, and their continued use is anticipated in this plan. The hospital, as an existing public facility in the planning area, is discussed in the next subsection.

Other nearby existing commercial developments which serve the planning area include shopping centers at the northeast and northwest corners of Avenue S and 25th Street East, one-half mile east of the planning area. Each of these centers is anchored by a grocery store and drug store, with retail shops and restaurants. On the southeast corner of that intersection, a gas station and fast-food restaurant have been constructed. These commercial developments, as well as commercial uses along Palmdale Boulevard, provide goods and services to the residents of the eastern portions of the planning area. Residents on the west end of the planning area are likely to travel north to a shopping center located at the southwest corner of Tierra Subida and Elizabeth

Lake Road for groceries and sundry goods. The presence of these centers will influence where future commercial development can locate, because of the commercial siting criteria contained in the General Plan. More importantly these centers will influence the timing of development of future commercial uses along the corridor because they will influence the market demand for new commercial development.

Public Facilities. There are a number of public facilities that have been constructed within the planning area. Desert Palms Hospital, currently unoccupied, represents both a land use constraint and opportunity. This facility located south of Avenue S between 10th Street East and Casa Verde Drive, has stood vacant since 1996 when the owner closed the facility following a period of financial trouble (see Figure 3-2, subarea 10). Although the facility is designed as a full service hospital, because of its proximity to the San Andreas and Little Rock Faults which run immediately south of the property the State will not permit a new owner/operator to reopen the facility as a hospital. Because of the seismic constraints, many other public uses such as schools or social care facilities are infeasible as well. Therefore, the hospital buildings remain vacant until an appropriate reuse can be identified. Because of the adjacent medical offices, one reuse option is a private medical office or clinic. Therefore, an Office Commercial (OC) land use designation is proposed for the site to encourage the facility's reuse. The OC designation, and associated C 2 Zoning, would permit medical offices, as well as a wide

range of professional office and supportive commercial uses.

Two park and ride facilities have been constructed within the Study Area, one west of the freeway east of Geiger Avenue, and the other located east of the freeway east of Calle Grillo Drive (see Figure 3-1). Combined, these park and rides provide 1,556 parking spaces for local commuters. Their function with respect to local circulation is addressed in Chapter 4 however these facilities also impact adjacent land use. The east park and ride is surrounded by Palmdale Water District property to the south and east, with Avenue S serving as a northern buffer. To the east of this park and ride is private property currently designated for commercial or business park uses, which will not be affected by the presence of the east park and ride. Alternatively the west park and ride is surrounded by land currently designated as SD (Special Development) and although enhanced landscaping was provided around its perimeter any abutting residential uses developed in the future will have to provide an adequate buffer between the parking area and the houses, in order to reduce the impacts on these future neighborhoods from vehicle noise and glare from headlights.

Palmdale Water District's facilities include Lake Palmdale, several large water tanks and the water treatment facility. The infrastructure components of these facilities are discussed in Chapter 5. With respect to their impact on land use, the primary issue is the maintenance of the water quality within the Lake. Lake Palmdale is the major drinking water reservoir serving

the City. Water from the lake is processed through the district's adjacent treatment facility. Following treatment, water is distributed to water tanks, and then to water district customers. The preservation of the quality of water in the Lake is of critical concern to both the Water District and the City. Therefore, any land use which has the potential to introduce contaminants to the Lake should be avoided.

According to the Water District, the quality of the water in the Lake is currently very good. To protect the water quality the District has required the construction of a diversion ditch around the south and west end of the lake, which diverts surface water runoff, generated from the nearby houses, around the lake, then southeast beneath Sierra Highway. However other paths for contamination, such as local groundwater cannot be contained in this manner. Therefore, uses such as gas stations, or other uses which generate or store large amounts of toxic materials, should be avoided in the immediate vicinity of the Lake.

The historic Palmdale Cemetery is found in the planning area at the northeast corner of Avenue S and 20th Street East (see Figure 3-2, subarea 13). Its presence influences land uses to the immediate south and east, because the extent of burials around the cemetery is unknown, therefore, surface disturbing activities, such as grading and construction should be avoided in these areas. A passive park is planned for the area surrounding the cemetery which is described in more detail in Chapter 6.

3.2.3 Adjacent Land Uses

Land uses which are adjacent to the planning area will also affect the land uses developed along the corridor. Like the existing uses within the Avenue S corridor, these adjacent uses will influence the type, intensity and timing of development, and are therefore relevant to this land use analysis for the planning area.

Specific Plan Communities. To the west of the planning area are approximately 12,000 acres on which two Specific Plans have been approved for master planned communities: the Ritter Ranch and City Ranch Specific Plans (see Figure 3-1). These projects, if fully built out, would create up to 14,400 new houses, with supporting commercial uses, parks, schools and open space. Avenue S will serve as a main access to the freeway for traffic from these two developments. Therefore, the timing of the development of these two areas will influence when widening of Avenue S west of the freeway will be necessary. The developers of these two projects have specific requirements for widening the roadway and providing trail and bikeway connections through the corridor. When certain development thresholds are met within either the Ritter Ranch or City Ranch projects, improvements to Avenue S are required.

These projects also will have an influence on the land uses on the west end of the planning area, because of their size and urban density. In order to support this planned development, the City Ranch project, which abuts the planning area's western boundary, will require the construction of an extensive network of

infrastructure. As designed, these infrastructure systems will extend north to the Amargosa Creek watershed, rather than east along the Avenue S Corridor; however, developers of land immediately adjacent to City Ranch will have the opportunity to connect to the City Ranch infrastructure systems. By gaining access to nearby water and sewer systems, these developers will pay only their fair share portion of the cost to extend utilities to the area, instead of bearing the greater financial burden of extending water and sewer lines for miles along Avenue S. This access to infrastructure will influence the time frame within which the western portion of the planning area develops.

Additionally, the City Ranch Specific Plan envisions commercial uses and small lot residential development on the eastern boundary. Therefore, a land use designation of SFR 2 (Single Family Residential-2, 0-3 dwelling units per acre) is proposed for land north of Avenue S, immediately east of the City Ranch Specific Plan boundary at 20th Street West, to serve as a transitional density between the more urban Specific Plan and the larger one-acre lots to the east.

Landfill. The Antelope Valley landfill is located north of the planning area. This privately owned facility has been functioning as a landfill since 1956, and the owner's current plans call for a significant expansion to the west, ensuring that the landfill operation will continue for an additional 20 years. The landfill has little direct impact on the planning area—no odors, wind blown trash or vectors affect planning area property. The only affect on the planning area is the visual impact from the landfill itself. The operators

ensure that adequate daily cover is provided, so trash is not usually visible from off-site; however the graded landfill face contrasts with the natural slopes behind it, making the facility very visible from viewpoints within the planning area (see Photo 3-1).

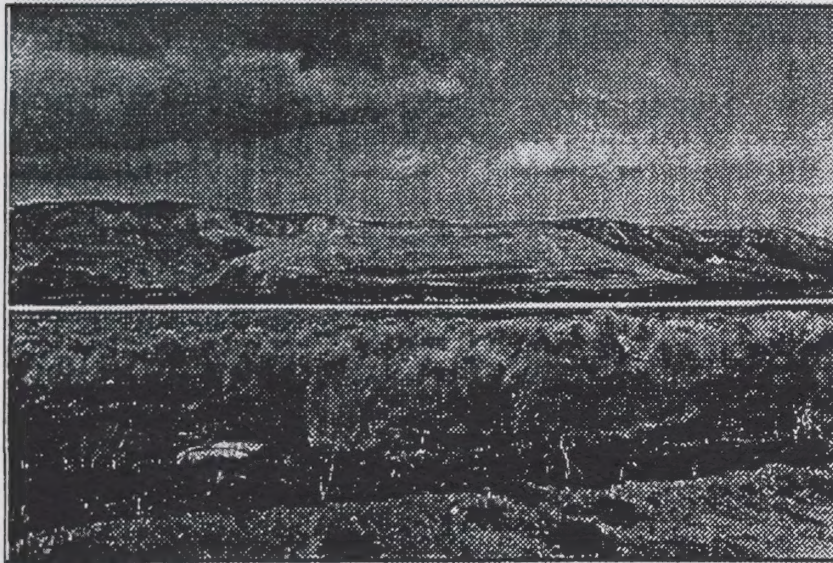


Photo 3-1. View of the landfill from Avenue S at the west end of the study area

Source: City of Palmdale Planning Dept.

By providing a location for solid waste disposal, the landfill is a valuable asset to the community and policies have been included in the General Plan to protect the facility from inappropriate development in the surrounding area. To ensure that the landfill is allowed to continue operation until its capacity has been exhausted, the land between the landfill operation and the aqueduct is proposed for Business Park uses to

act as a buffer between the landfill and land uses to the south.

Adjacent Residential Uses. Residential development surrounds the eastern end of the planning area, consisting mostly of single family houses. Any future development in the vicinity of these existing residences will be influenced by the need to maintain an appropriate land use interface to protect the quality of the neighborhoods. The need for land use compatibility will preclude industrial and intensive commercial uses, but office commercial, neighborhood commercial or residential development could easily be accommodated.

The west end of the planning area is located immediately north of the Ana Verde Hills development, which is characterized by large houses on lots which generally exceed one acre in size. This development pattern will influence future development to the north, within the planning area, because the Ana Verde Hills residents are situated at a higher elevation than most of the planning area, and preservation of their views, as well as views from the freeway will require compatible development uses and standards.

3.2.4 Other Conditions Which Affect Land Use

Chapter 2 outlines a number of environmental considerations which will affect existing and future land uses within the planning area. These include seismic hazards, the high pressure natural gas lines, hillside areas and sensitive views, biological resources and cultural resources. These issues serve as a primary constraint to higher intensity development in certain portions of the Planning Area. Sites with slopes

exceeding ten percent are not appropriate for certain commercial and industrial land uses, pursuant to the City's Zoning Ordinance. Areas with seismic hazards may not be appropriate for certain commercial or industrial uses which may have a potential risk of accidental spills or releases of toxic or hazardous materials. These risks may be greater near the fault, where ground rupture and other seismic hazards are more likely to occur

Likewise, infrastructure availability as described in Chapter 5, will have a significant influence on future land uses. The extension of sanitary sewer to serve all parcels within the planning area will be costly. If sewer services can be provided, the area surrounding the Avenue S/freeway interchange will represent a prime opportunity to develop commercial services oriented toward the commuter traffic using Avenue S. However should the solution to providing adequate sanitary sewers to the area remain elusive, then development within this area will remain constrained.

There are physical conditions of the planning area that will also affect land use. Certain features of the planning area act as barriers, such as the freeway, Sierra Highway, the railroads, and the aqueduct, because they physically separate areas and serve as natural boundaries between land uses. For example, north of the aqueduct on the west end of the planning area, a land use designation of business park is proposed, while immediately south of the aqueduct, the land will be designated for single family residential development. The aqueduct provides a visual, physical and psychological separation between these uses, so

interface problems between the intensive business park and the single family houses will be minimized.

Alternatively, other features will function to connect parcels within the planning area. Tierra Subida, because of its topography, acts to connect the land along it, rather than to separate it. The canyon-like features and uneven terrain create a sense of closeness along the portion of the roadway within the planning area. If land uses on either side of the roadway varied considerably, it would generate a sense of discontinuity even though the street serves to separate the parcels. Whether a physical feature functions as a barrier or a corridor, it will have an influence on adjacent land uses, and therefore, it needs to be considered in the planning process.

3.2.5 Undeveloped Land

Approximately 64 percent, or 1170 acres, of the planning area remains vacant. Most vacant properties can be found in the central and western portions of the planning area; however, vacant parcels are located throughout. Although the undeveloped lands represent the greatest opportunity to implement the objectives set forth in this Area Plan, there are many obstacles to its development. For example, many vacant parcels are located in hillside areas and in earthquake fault zones, and nearly all vacant parcels in the planning area lack infrastructure. Development potential on vacant parcels is influenced by all of the issues described above, including existing and adjacent development, and the issues described in the Environmental Considerations and Infrastructure Chapters. General Plan goals, objectives and policies also play an integral role in recommendations for appropriate land use

designations for each parcel, developed or not, within the planning area.

Vacant Land West of the Freeway As shown on Photo 1 1 in Chapter 1, the highest proportion of undeveloped land within the planning area is located west of the freeway in the area currently designated as SD (Special Development). Portions of this area are impacted by hillside slopes and earthquake fault zones. The high pressure natural gas lines pass along Avenue S to a point west of Tovey Avenue, where they veer to the south, toward Acton. The California Aqueduct also traverses this portion of the planning area. The development pattern that has been established in this area consists of single family residential development on large lots, usually greater than one acre in size. The neighborhoods have a rural character with substantial separation between the houses, which in a few cases take access from unpaved roads. Additionally the development planned within the City Ranch Specific Plan is primarily residential in nature, although higher development densities are anticipated in the Specific Plan area, than currently exist within the large lot subdivisions to the east.

The land near the two freeway off-ramps provide opportunities for commercial development that would serve commuters on Avenue S and freeway travelers. However as explained in Chapter 5, this portion of the planning area is constrained by the lack of a sanitary sewer and a method of extending this infrastructure to the area has not yet been identified (see Figure 3-2, subarea 5). Also, because of the steep hillsides and seismic constraints that are present on the north side of Avenue S near the interchange, this land would not



Photo 3-2: View of the flatter area west of the A.V Freeway appropriate for commercial use

Source: City of Palmdale Planning Dept.



Photo 3-3: View of the flatter area east of the A.V Freeway and south of Avenue S (in foreground) appropriate for commercial use

Source: City of Palmdale Planning Dept.

meet some of the General Plan locational criteria for commercial uses. Based on consideration of the existing development and physical and environmental constraints, it was determined that much of the vacant land within this portion of the planning area is best

suited for low density residential development; if sewers become available, the flatter areas near the freeway offramps would be appropriate for commercial use (see Photos 3-2 and 3-3).

Vacant Land Between the Freeway and Sierra Highway

Between the freeway and Sierra Highway a number of development constraints influence the vacant land. Hillside slopes, earthquake fault zones, and the high pressure natural gas lines can be found in this zone. North of Avenue S in this portion of the planning area, a few single family houses, an unfinished commercial building and a water tank are the only developments (see Figure 3-2, subareas 6 and 7). An additional water tank will soon be constructed directly west of the Union Pacific railroad, on property currently owned by Palmdale Water District. The remaining parcels are currently vacant. North of the planning area are existing single family residential subdivisions, with suburban densities of roughly four dwelling units per acre. The parcels which front onto the north side of Avenue S are small, approximately an acre and a half in size, and numerous, totaling fourteen. If each parcel constructed its own driveway onto Avenue S, a major arterial roadway then circulation problems could occur. Construction of a local street, connecting to 5th Street East, along the northern boundary of these parcels would alleviate access concerns and ensure the free-flow of traffic along Avenue S. In light of the existing development and development constraints, both environmental and related to infrastructure, low density residential development is appropriate for most of this portion of the planning area. A designation of PF (Public Facility) will be placed on land controlled by Palmdale Water District, where tanks have been

constructed or are anticipated in the immediate future. On the northeast corner of 5th Street East and Avenue S, an opportunity exists for certain types of commercial development, because the parcels in this location are relatively flat, sewer lines can feasibly be extended to the site, and the location is in substantially conformance with the commercial siting criteria contained in the General Plan.

Lake Palmdale represents the most prominent feature on the south side of Avenue S in this portion of the planning area. The City has constructed a park and ride adjacent to the property owned by Palmdale Water District, south of Avenue S. Vacant land can be found between the publicly owned land and the freeway (see Figure 3-2, subarea 5). The area is located within a prominent and sensitive viewshed, but its proximity to the freeway and Avenue S make these vacant parcels prime for commercial development. The constraint to development of these parcels is the lack of a sewer line and the financial and environmental problems of extending a sewer to serve that area. This constraint is explained in detail in Chapter 5 and because of its seriousness, development of these vacant parcels for commercial uses may not be possible for a considerable period of time.

Vacant Land East of Sierra Highway East of Sierra Highway existing development has more of an influence on future development of commercial land than in other portions of the planning area. In this area, infrastructure is readily available, and therefore the provision of adequate water sewer and dry utilities will not act as a development constraint. Within this portion of the planning area, the area north of Avenue S

is primarily vacant; a mini-storage facility and an existing residential subdivision represent the only developed land uses north of Avenue S (see Figure 3-2, subareas 8 and 12). However the land use designation on the vacant parcels in this area will be influenced by the need to ensure compatibility with nearby existing development.

On the eastern end of the planning area, single family residential subdivisions abut the north and west boundaries of the vacant parcel at the northwest corner of Avenue S and 20th Street East (see Figure 3-2, subarea 12). This parcel, also influenced by access constraints and located in the Alquist-Priolo Earthquake Fault Zone, would be best designated as SFR 2 (Single Family Residential-2, 0-3 dwelling units per acre), in order to provide compatibility with existing development. Likewise, to the west, the vacant property on either side of the existing residential subdivision, is most appropriately designated as SFR 3 (Single Family Residential, 3.1 to 6 dwelling units per acre) to match the adjacent development, given topographic considerations (see Figure 3-2, subarea 12). Along both sides of 10th Street East, designation of the vacant land for commercial land uses will be a good fit to provide a buffer between the residential development to the east and the intensive commercial manufacturing land use to the west (see Figure 3-2, subarea 8).

South of Avenue S, much of the land immediately adjacent to the roadway has been developed. Only the parcels at the southwest corner of Avenue S and Cemetery Road (which leads to Desert Lawn Cemetery), and at the southeast corner of Avenue S and Sierra Highway have not yet developed. These vacant parcels

have development constraints, including seismic hazards and the presence of the high pressure natural gas lines. However they may be appropriate for certain commercial uses. The Sierra Highway/Avenue S parcels are located at the intersection of two major arterial roadways, with developed commercial land across Sierra Highway (see Figure 3-2, subarea 9). In addition, because these vacant parcels are located near the existing mobile home park, a neighborhood commercial designation which would support the nearby residents by permitting commercial uses, such as drug stores, dry cleaners and grocery stores, would be appropriate.

The other vacant parcel in this section of the planning area is triangular in shape, situated between the Avenue S and the Colton Cutoff railroad, effectively separating the property from other adjacent uses (see Figure 3-2, subarea 15). Office commercial land uses could be developed on this parcel without unduly impacting any adjacent development.

The land surrounding Una Lake is highly sensitive (see Figure 3-2, subarea 11). These parcels are affected by earthquake fault zones and steep slopes. The lake, a sag pond created by the San Andreas Fault, is a unique desert resource and as such is important biologically. In order to maintain the quality of the water in this natural lake, and preserve its biological integrity a very low density residential land use (ER-Equestrian Residential) is proposed for this area.

East of the Una Lake properties is land which lies along the San Andreas fault zone. Although not originally a part of the corridor study the area is proposed for

redesignation to SFR 2 in order to bring it into conformance with General Plan Policy L1 4.2, which limits residential development within the fault zone.

3.2.6 Summary of Land Use Opportunities and Constraints

The following matrix (Table 3-4) provides a summary of the impacts discussed above. In order to relate these

impacts to specific portions of the planning area, the planning area has been divided into fifteen different subareas, as shown on Figure 3-2. A sixteenth subarea, for the public uses within the planning area, is listed in the matrix, but not shown on the associated exhibit. These subareas are defined by proposed land use boundaries or physical boundaries within the planning area, and have been delineated for discussion purposes only

Table 3-4
Summary of Land Use Constraints and Opportunities

SubArea Ref.	Location	Existing Land Uses	Development Opportunities and Constraints	Applicable General Plan Policies	Proposed Land Uses
1.	West end of planning area, north of the aqueduct	SD	Adjacent landfill, seismic, slopes, all vacant land, infrastructure can be extended.	L6.2.2, L7 1.11.h	BP
2.	West end of the planning area between the aqueduct and Avenue S	SD	Adjacent Specific Plan development, entirely vacant, infrastructure can be extended.	L1.3.1, L3.2.1	SFR 2
3.	West end of the Study area, south of Avenue S	SD	Adjacent low density development, steep slopes, all vacant, infrastructure can be extended.	L3.1.2, L1.4.3, L7.1.4 L3.4.3, S2.1.4 ER4 1.4	LDR
4	West of the Freeway north of Avenue S, east of areas 1 and 2	SD	Steep slopes, seismic hazards, sewer extension constrained, adjacent and on-site residential development, mostly vacant.	L1.3.1, L1.4.2, L1.4.3, L3.4.3, L7 1.11, S2.1.4 ER4.1.4	LDR
5.	Area immediately adjacent to the freeway north and south of Avenue S	SD, BP CC	Steep slopes, protection of water quality sewer extension constrained, seismic hazards, mostly vacant	L1.3.1 L1.4.2, L3.4.3, L4.2.9 L7 1.1 L7 1.3, L7 1.11, L5.2.6, PS2.2.4 S1.1.9, S2.1.4 ER4.1.4 L4 1.1	SD
6.	Area east of the freeway to 5 th Street East, north of Avenue S.	BP CC, SFR 1	Steep slopes, sewer extension constrained, adjacent residential development, seismic hazards, access issues, mostly vacant, access issue.	L1.3.1 L1.4.2, L1.4.3, L4.2.2, L7 1.3, L5.2.6, L4.2.8, S2.1.4 ER4 1.4	LDR
7	North of Avenue S, between 5 th Street East and the Union Pacific Railroad	IND	Adjacent residential development, infrastructure available, collector road planned through this subarea, mostly vacant.	L.4.2.1 L4.2.9 S2.1.4 L4 1.1	NC, SFR 3

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SubArea Ref.	Location	Existing Land Uses	Development Opportunities and Constraints	Applicable General Plan Policies	Proposed Land Uses
8.	North of Avenue S, on either side of Sierra Highway	NC, MFR	Adjacent industrial and residential development area is mostly vacant and infrastructure is available.	L4.1.1 L4.2.2, S2.1.4	CC, OC
9	Southeast and southwest corners of Avenue S and Sierra Highway	NC, SFR-2	Existing commercial development on west side, east side is vacant, seismic hazards, infrastructure is available, adjacent to mobile home park.	L1 4.2, L4.2.2, S2.1.4 L4 1.1	NC, CC
10.	South of Avenue S, between area 9 to the east boundary of the existing apartments	MFR, PF MR	Existing development is mobile home park, medical office, vacant hospital and apartments; no vacant land, seismic hazards	L1.4.2, L3.3.4 L4 1.1, S2.1.4	MR, OC, MFR
11.	Southeastern portion of the planning area	SFR-2, SFR-3	Steep slopes, seismic hazards, biological resources, water quality views, mostly vacant, infrastructure can be extended.	L1.3.1 L3.1.1, L1.4.2, ER2.1.4	ER, SFR-2
12.	North of Avenue S, from area 8 to 20 th Street East	NC, MFR, SFR 3	Adjacent residential development, seismic hazards, infrastructure available	L3.1.1, S2.1.4 L1.4.2, L4.2.9	SFR-3, SFR 2
13.	Northeast corner of Avenue S and 20 th Street East	PF OS	Historic resources, seismic hazards	ER7 1 1, L1.4.2	PF OS
14	Single family residential area south of Avenue S, between area 10 and the Colton Cutoff railroad	SP 15 (residential)	Existing residential development, some vacant land, infrastructure is available.	L3.1.1 L1 4.2, S2.1.4	SFR 3
15.	East of Colton Cutoff Railroad south of Avenue S	SP 15 (commercial)	Nearby residential development, seismic hazards, buffered by railroad and Avenue S, infrastructure is available.	L1.4.2, L4 1.1	OC
16.	All publicly owned properties	PF & various	Public ownership	L6.1.1, ER7 1.1, S2.1.4	PF

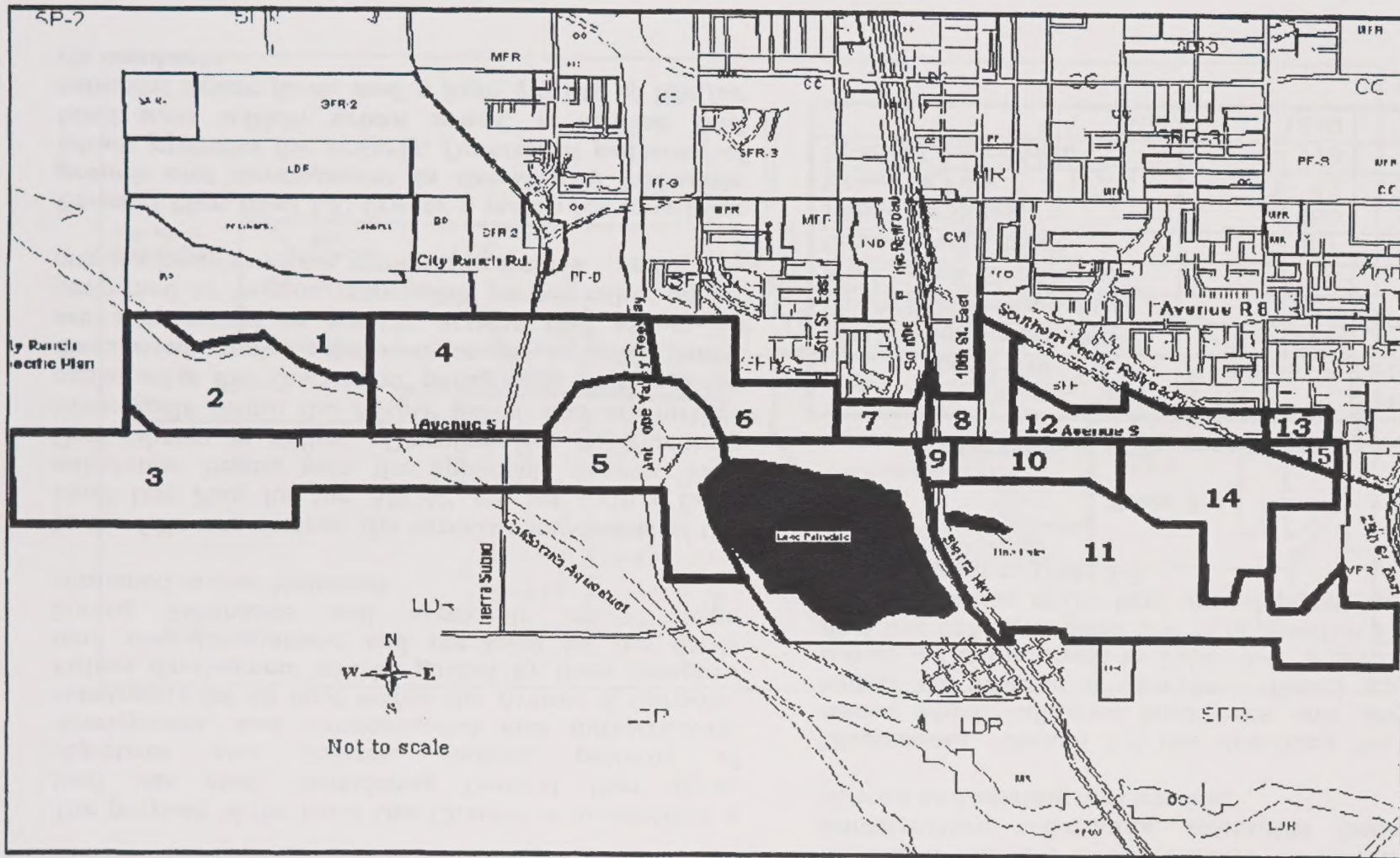


Figure 3-2: Planning Subareas Referred to In Table 3-4.

Source: City of Palmdale Planning Dept.

3.3 The Land Plan for the Avenue S Corridor

The purpose of the Land Use Chapter is to establish a land use plan, considering General Plan goals, objectives and policies, existing patterns of development, and environmental and infrastructure constraints for all land within the Avenue S Corridor. Future development will be guided by these assigned land use designations and regulated by the City's Zoning Ordinance and applicable action items contained in this document.

In the following section, the various components of the Land Use Plan for the ASCAP are set forth. Each subsection begins with the applicable General Plan Goal, shown in *italics*. Objectives for implementing these goals within the ASCAP follow and are further explained in the "Discussion" paragraphs. Within these discussions, implementation measures, or action items, are summarized as specific actions that are to be performed by various responsible parties either on an ongoing basis or within certain time frames.

General Plan Goal L3: Create a vision for long-term growth and development in the City of Palmdale which provides for orderly, functional patterns of land uses within urban areas, a unified and coherent urban form, and a high quality of life for its residents.

ASCAP Objective L1. Establish a land use plan for the Avenue S Corridor that considers environmental and infrastructure constraints, applicable General Plan policies and existing development.

Discussion: Section 3.2 has described the range of issues which influence land uses and development within the Avenue S Corridor. Based upon these issues, as summarized in Table 3-4, a draft land use plan has been generated and is depicted in Figure 3-3. The distribution of the land uses depicted on the draft plan is shown in Table 3-5.

Table 3-5

Distribution of Proposed Land Uses

Land Use	Acres	Percent of Study Area
Low Density Residential	708	38%
Single Family Residential	357	21%
Multi-family Residential	45	1%
Commercial/Office	107	6%
Public Facilities	460	25%
Business Park	45	2%
Special Development	118	7%
Total	1840	100%

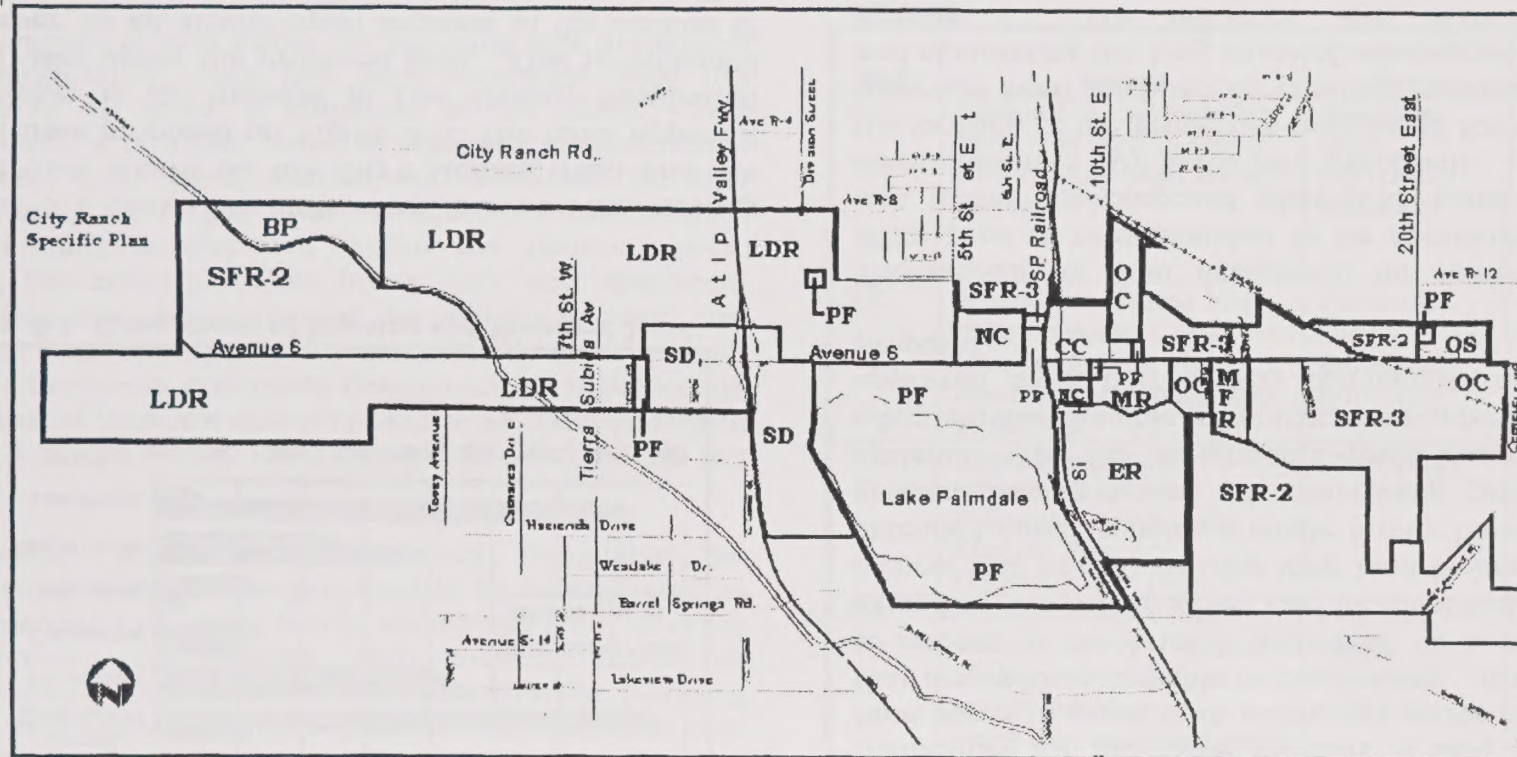


Figure 3-3: Proposed Avenue S Corridor Area Plan Land Use Plan

Source: City of Palmdale Planning Department

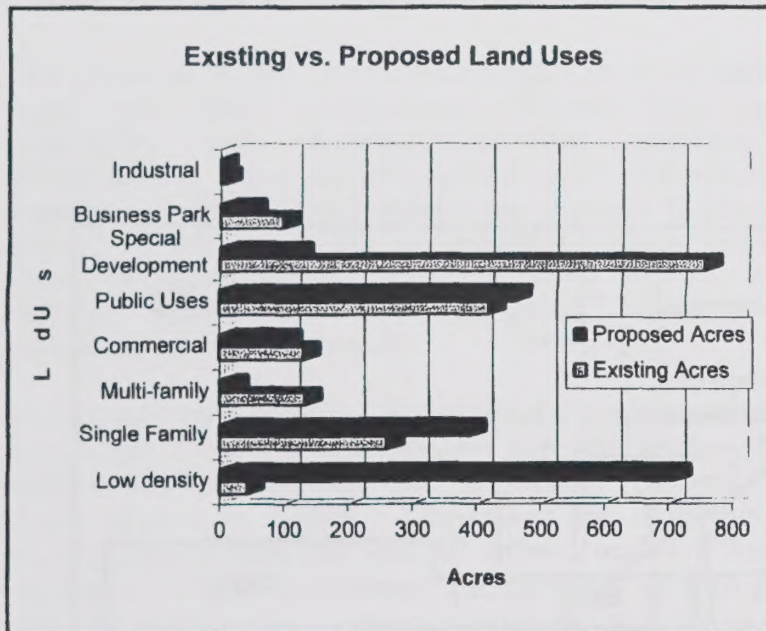


Chart 3-1. Comparison of Existing and Proposed Land Uses

Chart 3-1 shows the differences between the existing land uses shown on the City's General Plan and the land uses proposed on Figure 3-3. The most apparent difference is the increase in Low Density Residential land uses under the proposed plan. This is explained however by an almost equal decrease in the amount of land designated as SD (Special Development). This change is not inconsistent with the level of development envisioned for areas designated as SD. Therefore, the change from SD to low density residential does not

represent a significant increase in development intensity within the Study Area.

It was determined that an SD (Special Development) land use designation would be appropriate for 118 acres near the freeway off ramps. This designation was maintained for the flatter portions of land outside the fault zones in areas both north and south of Avenue S that are easily accessible to the freeway. It is intended to remain in place until such time as a solution for extending the public sewer can be identified. Property owners who want to develop their land before a sewer is extended could construct single family houses on lots greater than one acre in size, using private septic systems. The SD designation would require that an adequate and feasible infrastructure support system be approved as a part of any commercial development proposal.

The amount of land designated for commercial and office uses is recommended to be approximately 20% less under the proposed plan (133 acres previously designated and 107 acres now proposed). In addition, the location of the properties designated for commercial uses has been modified by creating commercial nodes and eliminating the long strips of commercial land along Avenue S. The reduction and redistribution of commercial uses within the planning area is appropriate, given the development constraints identified in Section 3.2, above, and is consistent with General Plan Land Use Policy L4.2.1. Sufficient

commercial acreage is still provided to serve the residents within the planning area, as well as commuter populations.

The amount of land within the planning area designated for multi-family uses has been decreased from 133 acres to 45 acres, a reduction of two-thirds. This reduction is proposed because topographic constraints, adjacent single family houses, and risks from the high pressure natural gas lines all affect the feasibility of multi-family development within the planning area. Only the existing mobile home park and apartment complex are recommended to retain a land use designation appropriate for multi-family development. The other areas previously designated for high density residential uses are now proposed to be redesignated to SFR 3 (Single Family Residential, 3.1 to 6 dwellings per acre)

Properties which were previously designated for industrial uses are now proposed to be redesignated as commercial and single family residential land, in order to provide compatibility with existing residential development to the north. No sites within the planning area were found to be appropriate for an industrial land use designation.

In order to implement the land plan shown on Figure 3-3, the General Plan Land Use Map will need to be amended through a concurrent General Plan Amendment. In addition, several policies contained in the General Plan which provide specific direction for

development of particular areas will need to be amended to reflect the information contained in this Area Plan.

Actions:

Ref.	Action	Responsible Party	Time Frame
3.1.	Amend the General Plan Land Use Map to reflect the land use plan shown on Figure 3-3.	Planning Dept., Reviewing Authority	Concurrent with the adoption of the Avenue S Corridor Area Plan
3.2.	Amend the Zoning Map to be consistent with the revised General Plan Land Use Map described in Ref. 3.1.	Planning Dept., Reviewing Authority	Concurrent with the adoption of the Area Plan
3.3.	Repeal Resolution No. 640 which adopted Palmdale Park South Specific Plan on December 11 1986.	Reviewing Authority	Concurrent with the adoption of the Area Plan
3.4	Amend General Plan policies L7 1.11, L7 1.3, L7 1.4 and L7 1.1, to reflect the changes caused by proposed land use plan, or to reflect new information contained elsewhere in the plan.	Planning Dept., Reviewing Authority	Concurrent with the adoption of the Avenue S Corridor Area Plan

ASCAP Objective L2: Adopt the Avenue S Corridor Area Plan as a means of ensuring orderly and logical development along Avenue S.

Discussion: Once the Avenue S Corridor Area Plan is adopted, completing the necessary planning efforts for the planning area, then implementation of the plan will commence. In order to ensure that the plan is implemented equally throughout the entire planning area, annexation of those areas which are currently unincorporated should commence immediately. This action is supported by General Plan Policies L1.2.1 and L1.2.5 which call for annexation in an orderly planned manner.

Future development proposals within the planning area will be reviewed for conformance with the proposed land use plan, and the recommendations and guidelines contained in the other chapters of this plan. In order to ensure that this review is carried out, and to better alert property owners and the public of the unique development criteria contained in the plan, it is recommended that the boundaries of the planning area be depicted on the General Plan Land Use Plan, with a reference to the Avenue S Corridor Area Plan.

Actions:

Ref.	Action	Responsible Party	Time Frame
3.5.	Pursue annexation of those portions of the planning area which are currently outside of the City's jurisdictional boundaries	Planning Dept., City Council	1998
3.6.	Review future development proposals within the Avenue S Corridor Area Plan for conformance with the recommendations and guidelines contained in the Plan.	Planning Dept., Reviewing Authority	Ongoing
3.7	Amend the General Plan Land Use Map to show the boundaries of the Avenue S Corridor Area Plan.	Planning Dept.	see Ref. 3.1

4 Chapter 4 Circulation Through the Avenue S Corridor

4.1 What are the Circulation Needs in the Avenue S Corridor?

For planning purposes in the Avenue S Corridor the term "circulation" includes the street and highway system designed to carry vehicular traffic; sidewalks, bikeways and trails designed for pedestrians, cyclists, hikers and equestrians; public transit, including fixed route bus and dial-a-ride service; and railroads, which traverse the planning area.

Probably the most compelling circulation issue within the Avenue S Corridor is the need to widen and improve Avenue S itself, the major arterial street along which the area plan is centered. This task will involve many factors, since Avenue S currently begins as a dirt track in the western portion of the planning area, crosses the California Aqueduct, intersects with Highway 14, climbs a hill over the San Andreas Fault, crosses the railroad at Sierra Highway at a grade which cannot feasibly be changed, crosses over another railroad via a bridge which must be widened, and is bordered to the south by two buried high pressure gas lines. These design constraints must be addressed in a manner which protects the capacity of Avenue S to safely carry large

volumes of traffic with minimal delays, while also providing adequate access from bordering neighborhoods.

Other circulation needs exist in the planning area as well, including the need for trail connections and access points, improved public transit, widening of existing local and collector streets throughout the area, and additional collector streets. In order to identify needs and provide input to this Chapter the City's Traffic Engineering Division prepared a report entitled *Avenue S Corridor Plan Access and Circulation Analysis*, and Willdan Associates, a consulting engineering firm, prepared an alignment study for Avenue R-8 and Avenue S, and a report on the location of the gas lines south of Avenue S. These reports are on file at the Planning Department for further reference.

The purpose of this Chapter of the Avenue S Corridor Area Plan is to explain existing conditions relating to circulation, to identify circulation constraints and opportunities, and to outline a Circulation Plan which meets the City's goals for meeting current and future travel needs within the Avenue S Corridor.

4.2 Existing Conditions, Constraints and Opportunities for Circulation

4.2.1 Avenue S

Roadway width and alignment. Avenue S is designated in the General Plan as a major arterial, meaning that at full build-out it will be a six-lane street, with three travel lanes going each direction. Although Avenue S will remain at its current location for the most part, several design considerations may alter its anticipated alignment in certain areas. Changes in



Photo 4-1. Avenue S at the westerly end of the Study Area, facing west. Through this ravine, the future road will be raised more than 25 feet above the current grade.

Source: City of Palmdale Planning Dept.

Roads then were very different from what they are today. The only road to Los Angeles was a dirt road down through Soledad Canyon, and at times after a rain it was impassable due to high water. The only way we could go to Lancaster was to go out to 10th Street West as there was no road along the railroad tracks as there is today. It was too sandy in that area to build one.

A. Earl Jones

Source: Antelope Valley History

topography the location of two high-pressure gas lines, railroad and aqueduct crossings, a freeway overpass and the pattern of existing development are all constraints that must be considered in the roadway's ultimate design and improvement.

Where development has occurred adjacent to Avenue S, the roadway has generally been improved with half-street improvements which include one or two travel lanes, curbs, gutters and sidewalks. However a significant portion of Avenue S has not yet been fully constructed to major arterial standards as envisioned under the General Plan. The existing right-of-way generally varies from 60 feet to 90 feet, with short segments at major intersections containing 100 feet. The street is paved for two to four travel lanes between the east boundary of the study area and Tovey Avenue, west of the California Aqueduct. West of Tovey Avenue, Avenue S is a dirt road extending into the undeveloped area encompassed within the approved Specific Plans for City Ranch and Ritter Ranch, where over 12,000 new homes are planned to be developed (see Photo 4-1). Avenue S will link these planned developments with the

freeway and the east side of the City. East of the study area boundary, Avenue S continues as a paved street to approximately 60th Street East where it becomes a dirt road until it is interrupted by quarry operations at approximately 80th Street East. The grade changes that occur along Avenue S between Sierra Highway and the Antelope Valley Freeway and also along the undeveloped portion of Avenue S west of Tovey Avenue, will require significant grading to widen the street to its full extent (see Photo 4-2 and Photo 4-3). A description of existing conditions on Avenue S is shown on Table 4-1

Traffic volume and capacity According to the City's Traffic Engineering Division, traffic volumes along Avenue S in 1996 ranged from approximately 6,000 vehicles per day (vpd) west of the freeway to 27,000 vpd east of Sierra Highway (see Table 4-1). These volumes are well within the capacity of the current Avenue S roadway to carry traffic, and the street is currently operating at a Level of Service C or better, which is consistent with General Plan policies. (In traffic analysis, the Level of Service or LOS measurement indicates how well traffic can travel on that street, with LOS A indicating free-flowing traffic, LOS E indicating



Photo 4-2: Avenue S east of the Antelope Valley Freeway looking east. The road over this knoll will need to be lowered by as much as eight feet in the future.

Source: City of Palmdale Planning Dept.

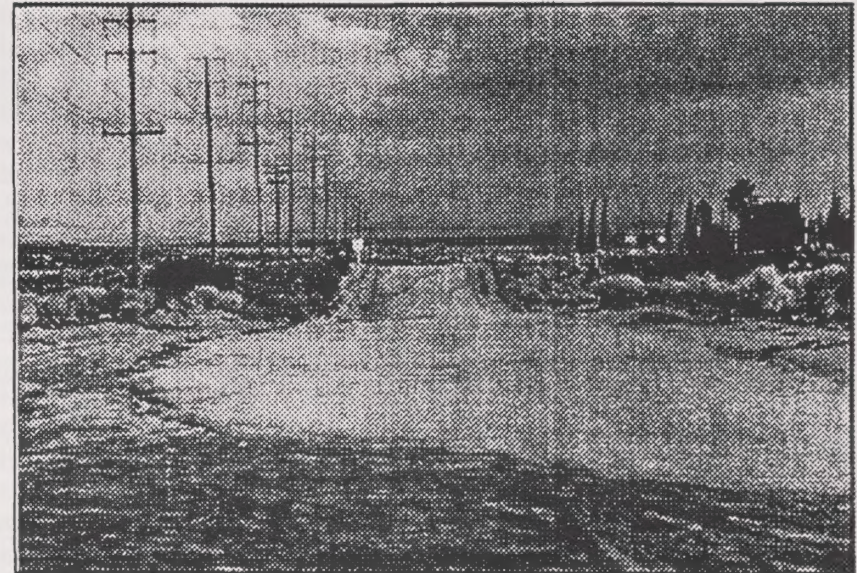


Photo 4-3: Avenue S west of Tovey Road, facing east. The future road will be 10 feet higher than the existing road in this location.

Source: City of Palmdale Planning Dept.

highly congested traffic conditions, and LOS F indicating gridlock.) A traffic model based on projected traffic volumes for the year 2020 was prepared as a part of the Avenue S Corridor Study to determine the location and capacity of proposed arterial roadways. This model showed that without construction of additional lanes, the traffic volumes projected for Avenue S are estimated to operate at LOS F which is clearly undesirable.

Railroad Crossings. Avenue S crosses rail lines at two locations within the study area, one at the 1800 block of Avenue S and again just west of Sierra Highway. At the easterly Union Pacific Railroad line, Avenue S crosses over the line with a bridge wide enough to accommodate one traffic lane in each direction and a pedestrian walkway on the south side. This bridge will require widening as well as substantial seismic upgrades in order to accommodate the six planned travel lanes. A pumping station and two high pressure gas lines lie south of the existing bridge.

The railroad crossing west of Sierra Highway currently has no grade separation, as the roadway crosses the tracks at grade.

Aqueduct Crossing. A two-lane bridge currently exists across the California Aqueduct along Avenue S. The two high-pressure natural gas lines pass beneath the

existing bridge, before turning and heading southwest toward Santa Clarita.

Design Speed. "Design speed" indicates the rate of speed at which vehicles can safely travel along a particular roadway based on the design characteristics of that road. Roads that are designed to be generally level, with wide or gradual curves, have "high" design speeds because vehicles can safely travel these roads at faster speeds. In contrast, roads with sharp inclines and narrow curves have lower design speeds. Design speed is usually 10-20 miles per hour higher than the posted speed limit; this difference is to accommodate a measure of traffic safety. The posted speed limit on Avenue S through the study area is 50-55 miles per hour.

Freeway Interchange. The current right-of-way for Avenue S as it passes under the Antelope Valley Freeway (SR 14) is 100 feet wide. Improvements presently include a 14-foot wide center median containing a center row of bridge support columns, and 35 feet of paved road in both directions to the outside curb and gutter with additional rows of bridge support columns on either side which are located eight feet away from the outside curb faces. Northbound and southbound on- and off-ramps connect Avenue S to the freeway. At the present time, both off-ramps contain a right-turn lane and a through-lane/left turn lane controlled by stop signs.

Table 4-1
Existing Conditions of Avenue S within the Planning Area
September, 1997

Segment Location	Vehicles Per Day	LOS	Description
From 25 th St. E. to Cemetery Road	24,000	B	2 lanes each direction and left-turn lane. Fully improved with curb, gutter & sidewalk on both sides. Curb-to-curb width 84 ft. Posted 55 mph.
From Cemetery Road to 20 th St. E.	22,000	B	2 eastbound lanes, 1 westbound lane (transitioning from 2), left-turn lane. Paved. Fully improved on north half only with curb, gutter & sidewalk adjacent to residential; other portions lack curb, gutter & sidewalks. Width varies from 36 to 80 ft. Posted 55 mph.
From 20 th St. E. to Casa Verde Drive	22,000	B	1 lane each direction, (westbound lane transitions from 2) right and left turn pockets. Width varies from 28 to 50 ft. Paved; some portions fully improved, others lack curb, gutter & sidewalks. Crosses railroad with 2-lane bridge. Posted 55 mph.
From Casa Verde Drive to 10 th St. E.	25,000	B	1 lane each direction with left turn lane (eastbound transitions from 2 lanes, with right turn pocket). Paved; some segments fully improved, others lack curb, gutter & sidewalk. Width varies from 36 to 84 ft. Posted 55 mph.
From 10 th St. E. to Sierra Hwy	27,000	C	2 eastbound lanes, 1 westbound lane, left turn lane. Paved, but no curb, gutter or sidewalks. Width is 60 ft. Posted 55 mph
From Sierra Hwy to 5 th St. E.	20,000	A	1 lane each direction and turn pockets. Paved, but no curb, gutter or sidewalks. Width varies from 26 to 84 ft. Posted speed 55 mph. Separated paved bikeway on north side. At-grade railroad crossing.
From 5 th St. E. to AV Freeway (SR 14)	20,000	A	1 lane each direction and left turn pockets. Bike lanes on both sides of roadway to park and ride. Width 36 ft. Paved, some curb, gutter and sidewalk. On and off ramps to freeway Posted 50 mph. Hill in this segment should be lowered to increase design speed; will require gas line relocation.
From AV Freeway to Tierra Subida Avenue	6,000	A	1 lane each direction, left turn pocket. Striped for 2 through lanes in each direction under freeway Paved, some curb gutter & sidewalk. Width 36 ft. On and off ramps to south-bound freeway
West of Tierra Subida Avenue	N/A	N/A	1 lane each direction. Paved to Tovey Rd, unpaved to west; no curb, gutter sidewalk. Width 26 feet. Crosses California Aqueduct. Posted 55 mph.

Source: City of Palmdale Traffic Engineer

Intersection Improvements. Within the study area, major intersections along Avenue S include Sierra Highway and a full diamond interchange at the Antelope Valley Freeway. Tierra Subida Avenue, west of the freeway, is the only other four-way intersection along Avenue S within the study area. 5th, 10th, and 20th Streets East intersect with Avenue S on the north side only. Because of existing development and the presence of Lake Palmdale, these roads are not planned to continue to the south. South of Avenue S, Calle Grillo Road runs parallel to the freeway and intersects Avenue S east of the freeway off ramp. This street is paved and provides secondary access to the City's park and ride facility located east of the freeway; however, it currently dead ends north of Barrel Springs Road. If this street were to be extended in the future to the south, it could provide additional access between Barrel Springs Road and Avenue S.

Gas Line Easement. The vertical and horizontal location of the Gas Company's two 30" high-pressure natural gas lines located along the southerly alignment of Avenue S will impact future street improvements along Avenue S. In order to determine the precise depth of these lines, the City contracted with a local engineering firm to excavate various points along the gas line easement. This information was used to evaluate whether portions of the gas lines would need to be relocated or whether it would be more cost effective to shift the centerline of the street to avoid moving them.

The study determined that the gas lines are located south of the existing pavement edge in the easement area, and range in depth from 46 inches below ground to over 10 feet deep.

Jurisdictional Issues. Avenue S is the boundary along much of the study area between the City of Palmdale and unincorporated County land (see Photo 1.1). The County of Los Angeles' standard for major arterial streets requires only a 100-foot right-of-way to accommodate four lanes with a 14-foot center median and parking on both sides of the street. In some instances, the County prohibits on-street parking in order to make room for two additional lanes within this right-of-way. The City requires a minimum of 104 feet of right-of-way along major arterials to accommodate six lanes of traffic and an 18-foot center median. The additional four feet of right-of-way is included in the center median. This allows room within the median at left-turn lanes for a pedestrian refuge landing and/or decorative hardscape.

4.2.2 Collector and Local Streets

Figure 4-1 shows the portion of the General Plan Circulation Map which covers the project site. This plan shows the location of existing and future arterial roadways. However, collector and local streets are not identified in the General Plan.

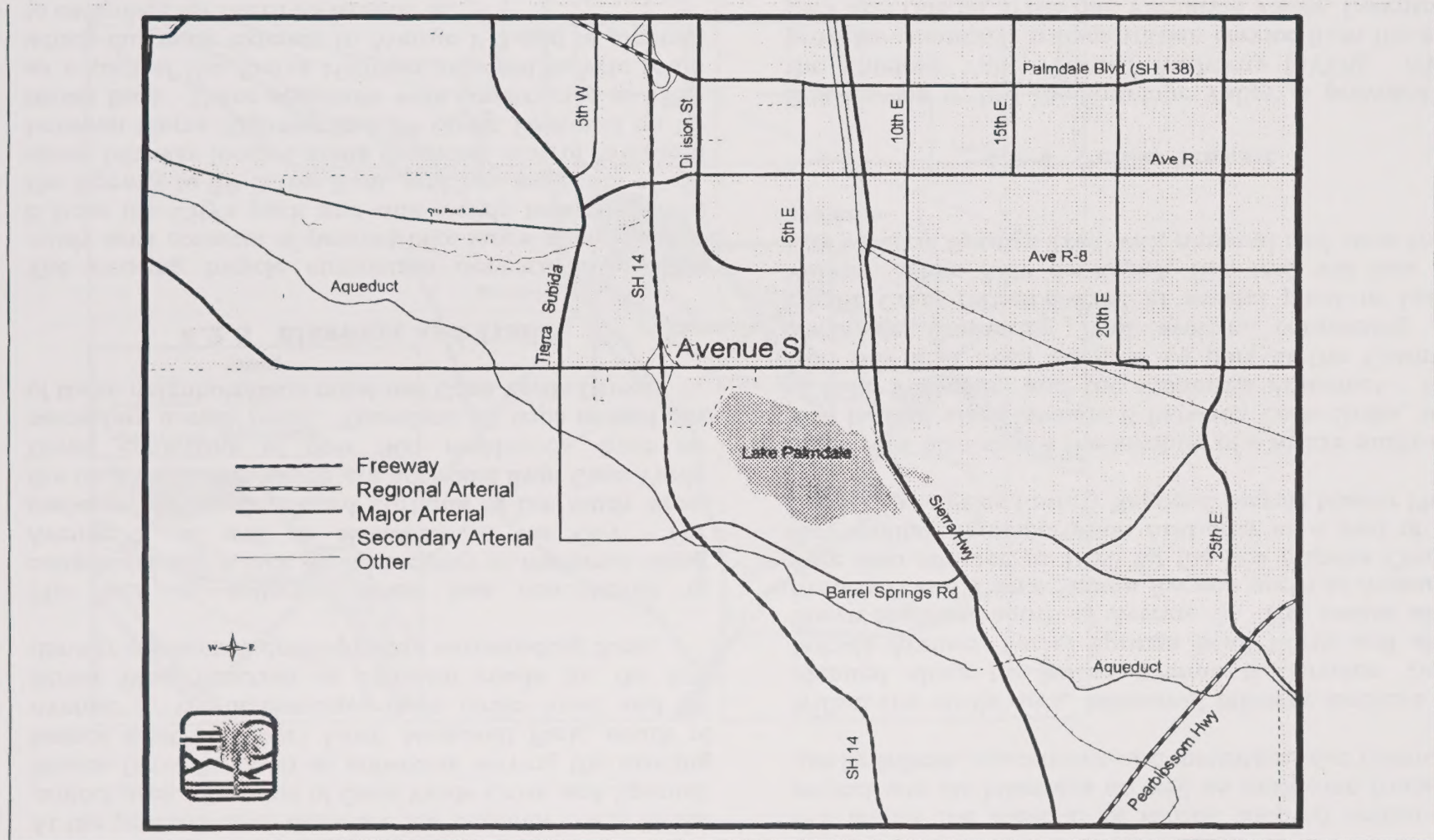


Figure 4-1. Portion of the General Plan Circulation Map showing the Avenue S Corridor

Source: City of Palmdale General Plan

At the present time, there are few collector roads in the project area. Portions of Casa Verde Drive and Spanish Broom Drive function as collectors serving the existing homes west of Desert Lawn Memorial Park, south of Avenue S. Guyon Avenue, Calle Grillo Road and 7th Street West function as collector roads for the low density residential developments surrounding them.

The lack of collector roads has contributed to congestion and a lack of connectivity in the areas along Avenue S, as well as elsewhere in the City. For instance, in the developed portions of the study area, the neighborhoods which are accessed from Casa Verde Drive, consisting of over 500 residences, have no secondary access point. Therefore, all trips in and out of those neighborhoods must use Casa Verde Drive.

4.2.3 Bikeways and Trails

The existing bicycle circulation network within the study area consists of painted bike lanes along Avenue S from the City's park and ride facility located east of the freeway to 5th Street East, and two segments of off-street bikeway located along the north side of Avenue S between Sierra Highway and 5th Street East and on 5th Street East. These segments were constructed in 1996 as a part of the Sierra Highway regional bicycle route which currently extends to Avenue P-8 and is planned to extend as far north as Avenue M.

In 1994 the Parks, Recreation and Trails (PRT) Element was adopted as part of the City's General Plan to guide future development of parks, recreational facilities, multi-use trails, bikeways and open space areas to serve existing and future residents of the City. Figure

4-2 shows the location of routes adopted within the project site for bikeways as well as multi-use trails for use by hikers, equestrians and mountain bike riders.

Within the study area, additional bikeway facilities are planned along the entire Avenue S Corridor. Tierra Subida Avenue, Barrel Springs Road North and along Sierra Highway south of Avenue S. The routes along Avenue S and Tierra Subida Avenue north of Avenue S were also adopted in 1995 by the Los Angeles County Metropolitan Transportation Authority as a part of the North Los Angeles County Regional Bicycle Master Plan.

Figure 4-2 also shows the location of a future multi-use trail located along Avenue S between Calle Grillo, west of Lake Palmdale, and the California Aqueduct. This trail has also been adopted as part of the County's Northside Connector Trail system, connecting the Pacific Crest National Trail at several point in Leona Valley. When fully developed, this trail will link the City's Barrel Springs Trail with national and state trails systems.

4.2.4 Public Transit

Bus service within the Antelope Valley is provided by the Antelope Valley Transit Authority (AVTA). AVTA provides commuter transportation service from the east park and ride lot to the San Fernando Valley Downtown Los Angeles and West Los Angeles, Monday through Friday. Additionally van pools and car pools take advantage of the 1,556 parking spaces which comprise both the east and west Avenue S park and ride lots, alleviating congestion on State Route 14.

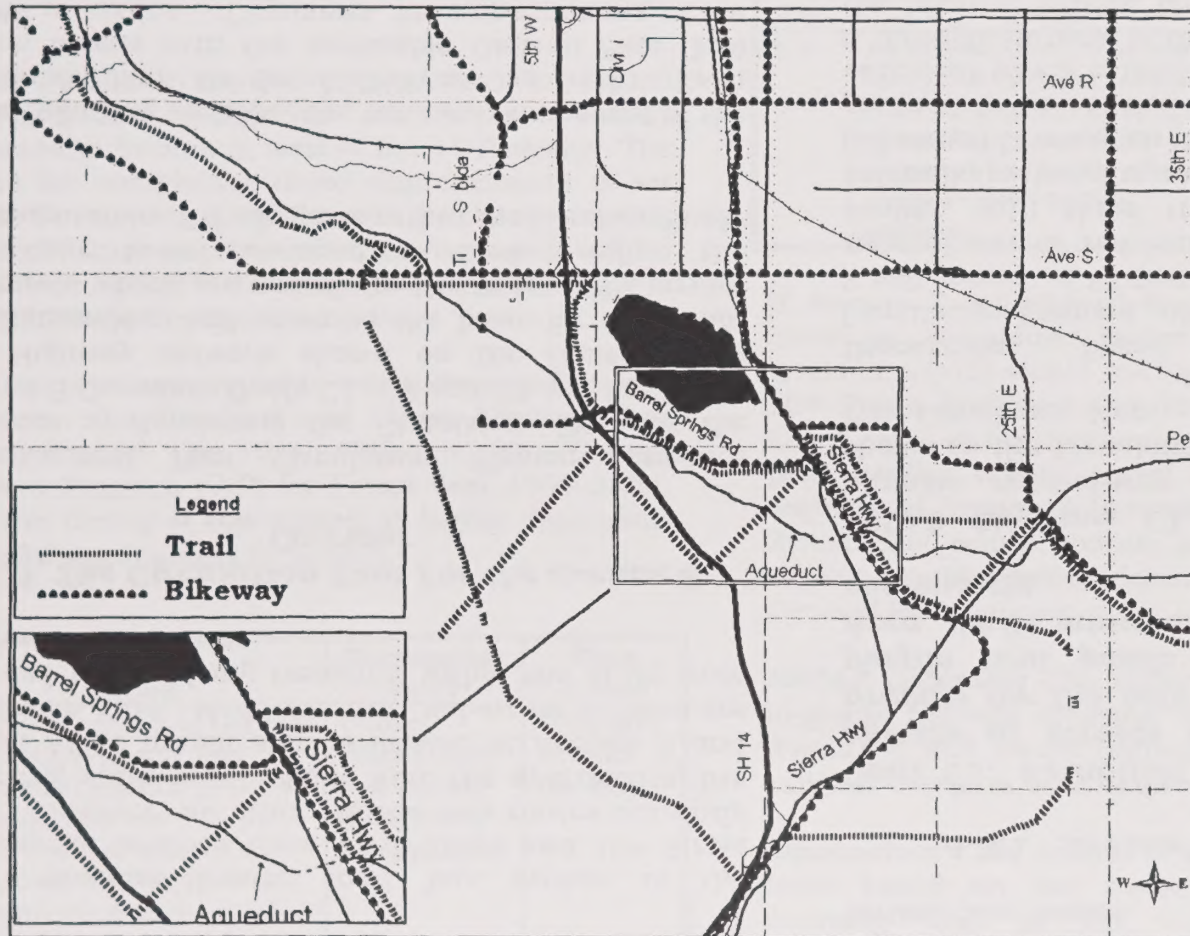


Figure 4-2: Portion of the General Plan Bikeway and Multi-Use Trails Plans showing the Avenue S Corridor

Source: City of Palmdale General Plan

AVTA operates nine routes throughout the Antelope Valley with the Antelope Valley Mall at 10th Street West and Avenue P and Lancaster City Park on 10th Street West and Avenue K-8 acting as transfer centers.

AVTA provides limited local bus service to the apartments between Casa Verde Drive and 10th Street East. However no other regular bus routes currently serve the study area. Aside from the apartments, the closest AVTA transit stop is located at Avenue S and 25th Street East. Medi-ride and Dial-a-ride services are provided to qualifying residents within the study area on an as needed basis.

4.3 The Circulation Plan For the Avenue S Corridor

The General Plan Circulation Element provides guidance in developing the Circulation Plan for the Avenue S Corridor. Goals C1, C2 and C3 and the Street and Highway network shown on the General Plan Circulation Map will serve as the basis for this Plan. Objectives which are specific to the Avenue S Corridor Plan have been developed to further refine the implementation of these goals within the Corridor Study Area.

In the following sections, the various components of the Circulation Plan for the ASCAP are set forth. Each section begins with the applicable General Plan Goal shown in italics. Objectives for implementing these goals within the ASCAP follow and are further

explained in Discussion sections. Within these discussions, implementation measures are summarized as specific Actions that are to be performed by various responsible parties either on an ongoing basis or within certain time frames.

4.3.1 Avenue S and Collector Roads

Goal C1. Establish, maintain and enhance a system of streets and highways which will provide for the safe and efficient movement of people and goods throughout the Planning Area, while minimizing adverse impacts on the community.

ASCAP Objective C1. Construct Avenue S to its ultimate right-of-way and paving configuration as shown in the Circulation Element and on the General Plan Circulation Map.

Discussion: Based on the City's General Plan Circulation Element, ultimate improvements to Avenue S will consist of 88 feet of paved roadway within a total right of way of 104 feet, which will include an 18-foot median with three traffic lanes and an eight-foot sidewalk/parkway in each direction. A separate Class I (off-street) bikeway on the south side of Avenue S is also planned to be constructed within an existing gas line easement which extends along the south side of Avenue S throughout most of the Corridor area. In areas where the bikeway cannot be accommodated within the gas line easement, the right-of-way for Avenue S will be

widened to 114 feet to include the bikeway adjacent to the roadway

The developers of both the Ritter Ranch and City Ranch Specific Plans have obligations for certain roadway improvements to Avenue S, west of the 14 Freeway. The time frame for completing those improvements is set forth in the Development Agreements for those projects. The required future improvements to Avenue S will be phased to correspond with anticipated traffic impacts and demand created by these projects.

A capital improvement project to widen Avenue S to four lanes between the Freeway and Sierra Highway has been programmed by the City in its Capital Improvement Program (CIP) for Fiscal Year 1999-2000. However, the timing of this project is highly dependent on successful applications for grants.

Actions:

Ref.	Action	Responsible Party	Time Frame
4.1.	Widen Avenue S to General Plan Right-of-way and pavement standards (ROW to vary from 104-114 feet with 6 lanes, median and off-street bikeway). Construction may be phased to accommodate anticipated demand.	Public Works Dept. and private developers, as applicable	1999 and beyond, per CIP
4.2.	Pursue state and federal grants to widen Avenue S.	Public Works Dept.	Ongoing

Ref.	Action	Responsible Party	Time Frame
4.3.	As development continues along the corridor, require that developers, including Ritter Ranch and City Ranch, provide fair share improvement to the roadway.	Reviewing authority for development projects	Ongoing

If Avenue S is widened to accommodate six lanes of travel as envisioned under the City's General Plan, levels of service would average LOS B or better between 20th Street East and the Antelope Valley Freeway and Los A west of the freeway. For limited periods during peak traffic times, travel along the one-half mile segment of Avenue S between 20th Street East and 25th Street East would operate at LOS D. These levels of service would be considered acceptable under current General Plan policies.

ASCAP Objective C2: Widen and improve the western at-grade railroad crossing west of the intersection of Avenue S and Sierra Highway and widen the existing railroad overpass west of 20th Street East.

Discussion: The proposed alignment of Avenue S has been based on the continued use of an at-grade crossing west of the Sierra Highway/Avenue S intersection. At this location, the hill west of the railroad creates line of sight limitations for drivers exiting the gas station at the southwest corner of Avenue S and Sierra Highway. In order to improve the line of sight approaching the intersection, while

maintaining the existing elevation at the railroad crossing, the Avenue S/Sierra Highway intersection will be raised by four feet. This change in elevation will impact the existing street and drainage improvements, including curbs, gutters, sidewalks and storm drains within 400 feet of the intersection. The existing service station and other building are not expected to be affected; however some on-site paved areas adjacent to both Sierra Highway and Avenue S will require modification, as will on-site drainage improvements.

In the alignment study prepared for Avenue S by Willdan, an alternative was developed which included an overhead grade separation at this westerly railroad crossing. This bridge would have to maintain a 23-foot clearance over the railroad beginning approximately 600 feet east of 5th Street East and extending to a point approximately 550 feet west of 10th Street East. This alternative would result in much of the same impacts to the existing infrastructure as the at-grade crossing with the additional cost of the bridge. Although a grade separation would be preferred to alleviate potential interface issues between vehicular and train traffic, it is not currently considered to be feasible because of the potential land use conflicts, the potential circulation problems and the cost. However the City Traffic Engineering Division has indicated that the alternative should receive further study in the future in order to determine if the constraints identified in the report can be accommodated by technology or design.

The grade separated crossing in the 1800 block east needs to be widened to accommodate three travel lanes in each direction. This widening is planned to be

accomplished by constructing a second bridge, adjacent to the existing bridge structure. This project has been programmed in the City's Capital Improvement Plan for Fiscal Years 1998-1999 to 2000-2001

Actions:

Ref.	Action	Responsible Party	Time Frame
4 4	Conduct a detailed analysis of the rail crossing west of Sierra Highway to determine the feasibility of a grade-separated intersection.	Public Works Dept.	2005
4.5.	Prepare street plans for Avenue S at-grade railroad crossing west of Sierra Highway	Public Works Dept.	As permitted by CIP budget constraints.
4.6.	Acquire additional right-of-way to accommodate the necessary intersection improvements for the Avenue S/Sierra Highway/ railroad intersection.	Public Works Dept.	As permitted by CIP budget constraints.
4 7	Consult with Union Pacific Railroad and Metropolitan Transportation Authority concerning proposed work across railroad rights-of-way	Public Works Dept.	Ongoing
4.8.	As development occurs at the northeast and northwest corners of the	Reviewing authority	Ongoing

Ref.	Action	Responsible Party	Time Frame
	Avenue S/Sierra Hwy intersection, require that projects are designed to accommodate the necessary ROW		
4 9	a. Design planned bridge improvements at the grade-separated crossing west of 20 th Street East. b. Pursue funding for the planned bridge improvements at the grade-separated crossing west of 20 th St. East.	Public Works	1998-1999 1998 and beyond per CIP

ASCAP Objective C3: Widen and improve the aqueduct crossing west of Tierra Subida Avenue.

Discussion: In order to avoid future traffic congestion along Elizabeth Lake Road created by development of City Ranch and Ritter Ranch, soon after development begins in these Specific Plan Areas, Avenue S, including the bridge over the California Aqueduct, will need to be widened to accommodate a minimum of four lanes. As development continues within these Specific Plans, full street improvements will be required along Avenue S, including the aqueduct bridge, which will need to accommodate six travel lanes, a center median, curbs, gutters, sidewalks and bike lanes. The Ritter Ranch

and City Ranch developers have the responsibility to complete these improvements, pursuant to the Development Agreements on those properties.

Actions:

Ref.	Action	Responsible Party	Time Frame
4 10.	Consult with the State Department of Water Resources to determine approval process for widening the bridge over the aqueduct.	Specific Plan developers and Public Works Dept.	Upon commencement of City Ranch and Ritter Ranch
4 11.	Acquire any additional right-of-way which may be necessary to accommodate the bridge construction.	Specific Plan developers and Public Works Dept.	Pursuant to Development Agreements
4 12.	Construct additional travel lanes across the aqueduct.	Specific Plan developers and Public Works Dept.	Pursuant to Development Agreements

ASCAP Objective C4: Design the horizontal and vertical alignments of Avenue S for design speeds of between 50 and 60 miles per hour in order to provide a high margin of safety for motorists.

Discussion: Avenue S will be designed to accommodate speeds of 60 miles per hour along most of the roadway. A lower design speed, but no less than 50 miles per hour may be used where warranted by topographic conditions, because the grading needed in some areas to provide a 60 mile per hour design speed would

require extensive cut and fill. One of the most noticeable of these areas will occur where grade changes located between the Antelope Valley Freeway and 5th Street East require over five feet of cut or fifteen feet of fill to achieve an acceptable sight distance (see Photo 4-2).

Actions:

Ref.	Action	Responsible Party	Time Frame
4 13.	Review street improvement plans to ensure that they reflect design standards appropriate for 50-60 mph design speed.	Public Works Dept.	1998 and ongoing

ASCAP Objective C5: Ensure that adequate right-of-way is provided to accommodate necessary freeway ramp improvements and to provide the necessary width for improvements for Avenue S across Caltrans' right-of-way

Discussion: Figure 4-3 reflects a concept developed by Willdan Associates which demonstrates how Avenue S could be widened under the freeway to achieve the desired 114-foot right-of-way including a Class I bike path. Under this alternative, the center median would be reduced to 13 feet wide and the outside curb and gutter would be relocated to provide a 34-foot paved road to either side of the center median to accommodate three lanes of traffic. Five-foot walkways on both sides would be provided for pedestrians adjacent to the freeway embankment.

As development in the study area occurs, improvements to the freeway on- and off-ramps will be required. A traffic analysis conducted in 1990 to assess circulation needs in the southwestern portion of the City assumed that the southbound intersection would contain the following lane configurations:

Southbound off-ramp: one right-turn lane,
two left turn lanes,
Avenue S westbound: three through lanes,
one left-turn lane,
Avenue S eastbound: two through lanes,
two right-turn lanes.

The northbound intersection would be configured as follows:

Northbound off-ramp: two left-turn lanes,
one right turn lane,
Avenue S westbound: two through lanes,
Avenue S eastbound: two through lanes.

Because this analysis was prepared to assess traffic impacts throughout the southwest portions of the City and not specifically to identify necessary improvements to the freeway ramps, these future configurations may be modified. Consultation with Caltrans will be necessary to determine the range of improvements which may be required to accommodate future traffic demand on this intersection. However it is clear that additional lanes on both the on- and off-ramps will be needed.

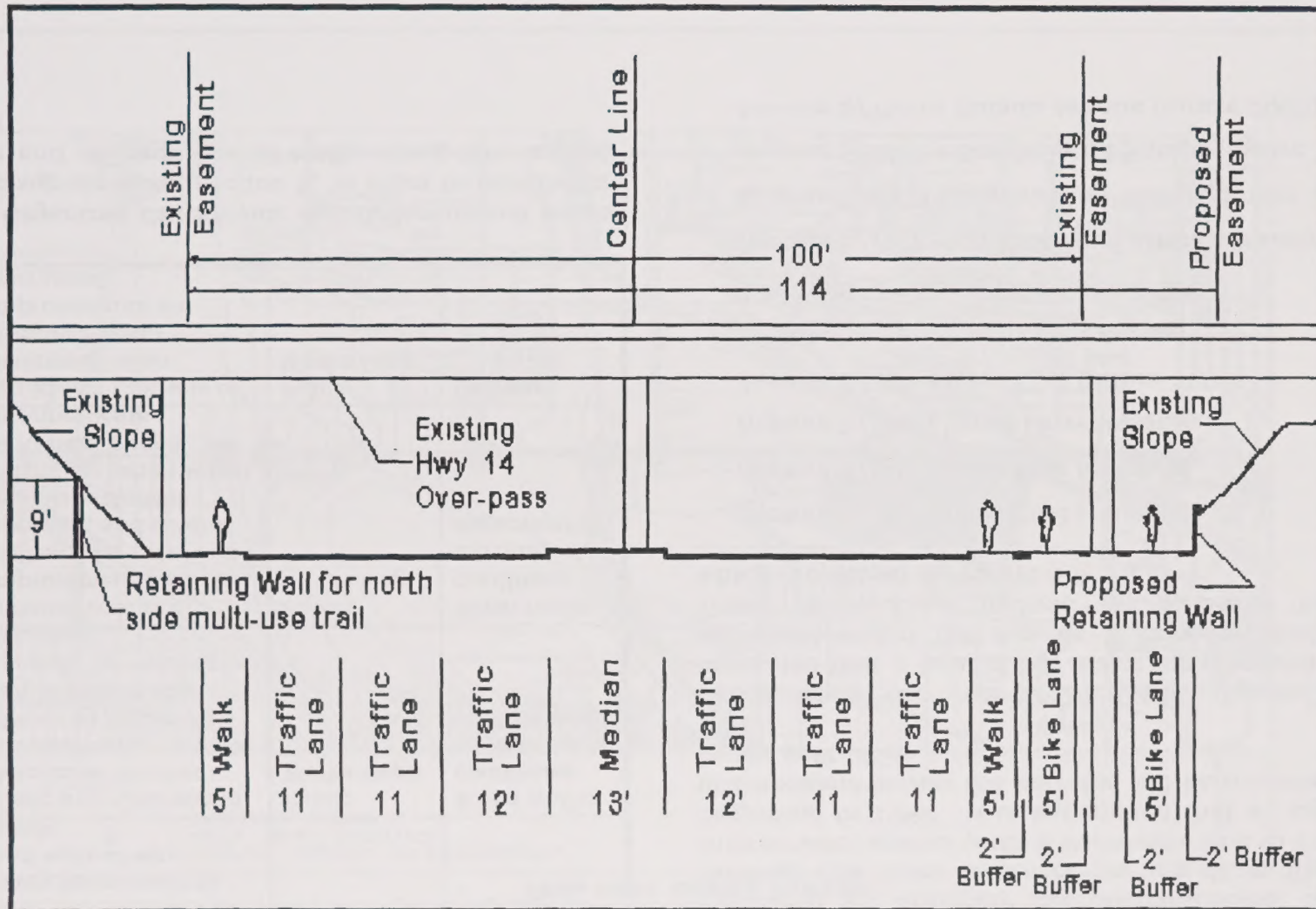


Figure 4-3: Avenue S cross section beneath the Antelope Valley Freeway Overpass

Source: Willdan Associates

Actions:

Ref.	Action	Responsible Party	Time Frame
4 14	Work with Caltrans to determine necessary ramp improvements and right-of-way needs.	Public Works Dept.	1998 and ongoing
4 15.	Work with Caltrans to determine whether planned improvements shown on Figure 4-3 can be constructed beneath the existing overpass.	Public Works Dept.	When traffic conditions warrant improvement
4 16.	Submit Avenue S improvement plans to Caltrans for review and approval, and obtain an encroachment permit for construction of Avenue S road improvements.	Public Works Dept.	When traffic conditions warrant improvement
4 17	Work with Caltrans to determine when Avenue S ramp improvements are warranted.	Public Works Dept.	Ongoing

ASCAP Objective C6: Provide an interconnected series of traffic signals along Avenue S, in order to provide for the safe and efficient flow of traffic along this arterial roadway

Discussion: The City of Palmdale has developed a Master Signal Management Plan to provide improved design, operation, coordination and maintenance of traffic signals into the future. Intersections along Avenue S are currently not interconnected; however funding has been approved to install a fiber-optic interconnect system (with a microwave link to City Hall) beginning in 1999. It is anticipated that all signalized intersections within the corridor will be interconnected by the year 2020.

Based upon the year 2020 traffic demand, it is estimated that a total of ten major intersections will be signalized within the Avenue S Corridor study area. These intersections include the following locations which are shown on Figure 4-4

- Avenue S/25th Street East (existing)
- Avenue S/20th Street East (existing)
- Avenue S/Casa Verde Drive (existing)
- Avenue S/10th Street East (future 1999)
- Avenue S/Sierra Highway (existing)
- Avenue S/5th Street East (future 2003)
- Avenue S/Park-and-Ride Lot Entrance (existing)
- Avenue S/SR 14 Northbound Ramps (future 2000)
- Avenue S/SR 14 Southbound Ramps (future 2000)
- Avenue S/Tierra Subida Avenue (future 2003)

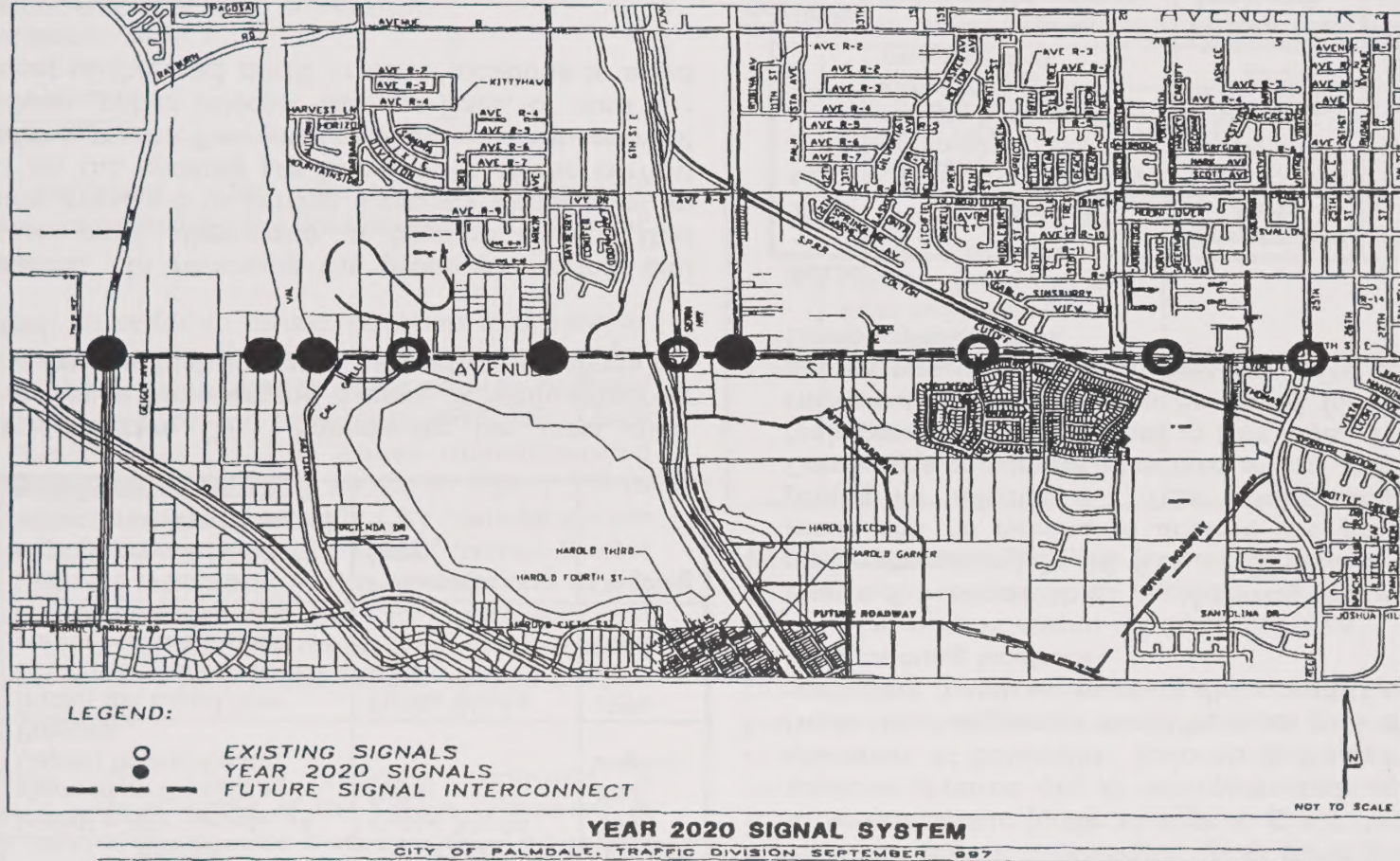


Figure 4-4: Avenue S Future Signal System

Source: City of Palmdale Traffic Engineer

Actions:

Ref.	Action	Responsible Party	Time Frame
4 18.	Install traffic signals, as planned in the City's Capital Improvement Program.	Public Works Dept.	1998 and ongoing
4 19	Install the signal fiber optic interconnect system, planned in the Capital Improvement Program.	Public Works Dept.	1999 and ongoing
4.20.	Continue to monitor signal warrants, and adjust priorities for signal installation as necessary	Public Works Dept.	Ongoing

ASCAP Objective C7: Provide for the most cost effective design for widening Avenue S, while ensuring that the existing high pressure natural gas pipelines are protected.

Discussion: In reviewing the proposed vertical and horizontal road alignments, it became evident that widening Avenue S in certain locations would have an impact on the existing gas lines south of the current edge of pavement. Two courses of action were reviewed by Willdan. either relocate the gas lines, or shift the alignment of the road north in three locations to avoid the gas lines.

The Gas Company requires that the pipelines be maintained at a recommended top-of-pipe depth of 42 inches below grade, or 36 inches if paving is part of the line coverage. The maximum allowable depth is 84 inches below grade in order to provide for maintenance,

although the Gas Company has approved the lines to be buried deeper in some instances. According to Willdan's report, three segments of these lines will need to be raised due to the change in grade needed to fully improve Avenue S, at an estimated cost for line relocation of \$809,000 Relocating the gas lines along these three segments would be more cost-effective than realigning the street to avoid disturbing the gas lines at their existing locations.

Figure 4-5 shows that, on the west end of the study area, approximately 18 feet of fill above the existing grade will be needed to achieve the proposed street profile for Avenue S. This would exceed the Gas Company's maximum standard of ten feet for the two high-pressure gas pipelines in this area. Therefore, the two pipelines will need to be raised for a distance of approximately 450 lineal feet in order to meet Gas Company standards.

Actions:

Ref.	Action	Responsible Party	Time Frame
4.21.	Obtain Gas Company approval for relocating the gas lines prior to street improvement plan approval.	Specific Plan developers and Public Works Dept.	1999 and ongoing
4.22.	In conjunction with widening the western portion of Avenue S, relocate the high pressure gas lines.	Specific Plan developers and Public Works Dept.	When traffic conditions warrant improvement

Ref.	Action	Responsible Party	Time Frame
4.23	Ensure that any grading activity in the gas line easement is in conformance with Gas Company requirements.	Public Works Dept.	Ongoing

ASCAP Objective C8: Resolve jurisdictional inconsistencies regarding the final design of the Avenue S roadway

Discussion: In order to obtain adequate right-of-way and consistent street improvements, it is recommended that either the County amend their master highway plan for this area to be consistent with the City's General Plan or that the City annex unincorporated land within the study area. As shown in Figure 1 1 in Chapter 1 areas currently outside City boundaries are located primarily along the south side of Avenue S west of Sierra Highway extending to the westerly end of the study area, with exception of the City's park and ride facilities. The north side of Avenue S generally located between the freeway and Tierra Subida is also outside existing City limits.

In addition, the County recently approved a development project south of the future alignment of Avenue S, west of the Avenue S study area. The access for this development was provided along a different future alignment of Avenue S than is currently planned by the City This discrepancy regarding the future

roadway alignment must also be resolved between the two jurisdictions.

Actions:

Ref.	Action	Responsible Party	Time Frame
4.24	Coordinate with Los Angeles County Department of Regional Planning and Los Angeles County Public Works Department to resolve right-of-way and street improvement inconsistencies.	Public Works Dept.	Ongoing
4.25.	File annexation applications with LAFCO in order to annex land along Avenue S into the City	Planning Dept.	1999 and ongoing

ASCAP Objective C9: Plan for and implement a system of collector roadways to provide connectivity and efficient circulation within the planning area.

Discussion: In reviewing the existing pattern of parcelization and development potential throughout the study area, it is evident that several new collector roadways will be needed to provide a safe and effective circulation system. Many parcels within the study area are land-locked, meaning that they do not currently have legal access to an existing street, and many of these are located some distance away from an existing or planned arterial roadway Also, if no collector roads

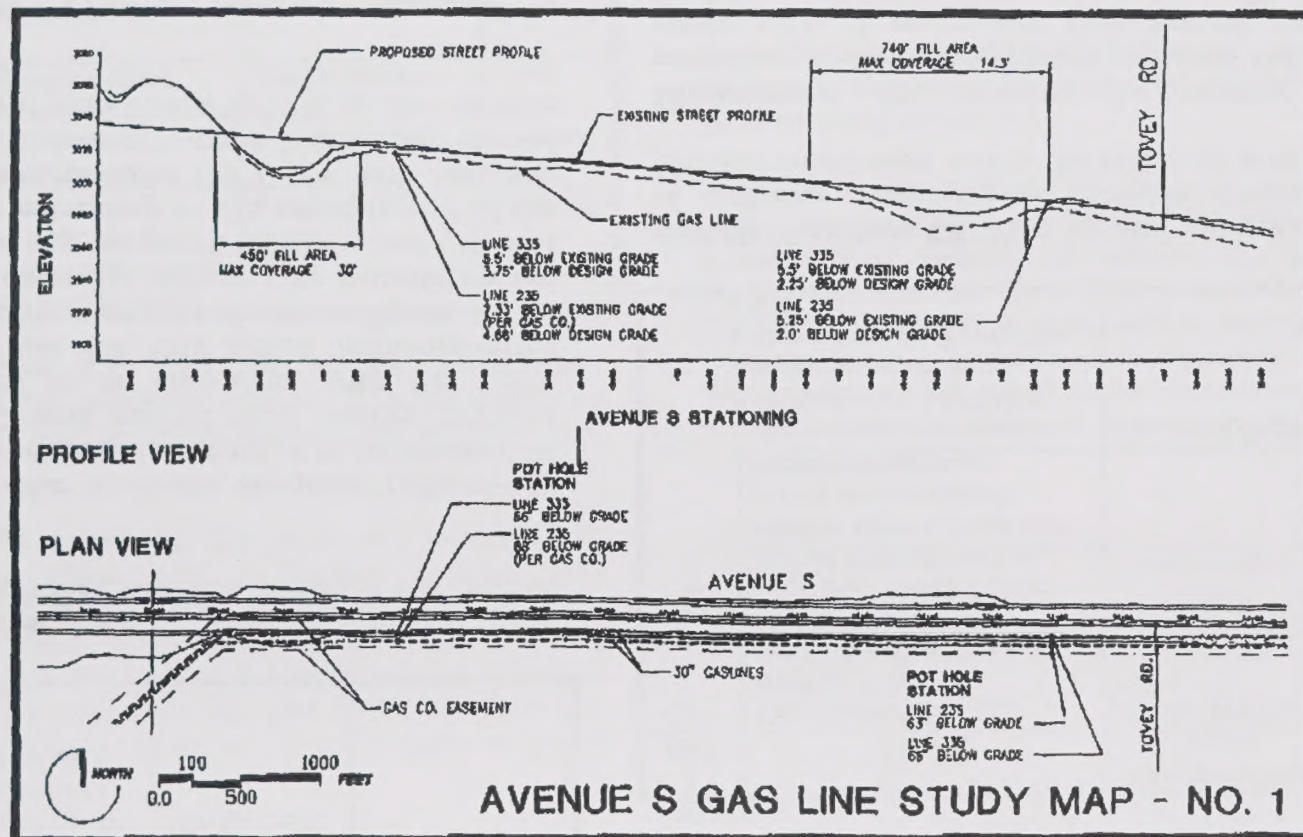


Figure 4-5: Location of High Pressure Gas Lines in relationship to the future alignment of Avenue S

Source: Willdan Associates

are developed, some small parcels will take access from a major arterial roadway such as Avenue S, which could result in a number of individual driveways interfering with the efficient flow of traffic along these roadways. Therefore, the lack of collector roads will contribute to a lack of connectivity and constrained traffic flow patterns through the study area.

The City's Traffic Engineering Division conducted an analysis of where future collector roadways would be needed. In order to assess the entire study area, it was divided into nine focus areas, which were then reviewed in detail to determine potential development, existing parcelization, topography and other natural alignment constraints. The Traffic Division's analysis concluded that two planned secondary arterial roads, Old Harold Road and Barrel Springs Road, and eight collector streets are needed in the Avenue S corridor to meet future circulation and access needs. The future collector roadways will be needed in the following locations, as shown on Figure 4-6.

Between the California Aqueduct and Avenue S, west of State Route 14

Between 5th and 6th Streets East;

Between 5th Street East and Avenue S;

Between Sierra Highway and Barrel Springs Road "North"

Between Barrel Springs Road "North" and Barrel Springs Road "South"

Barrel Springs Road "South" extending north to Barrel Springs Road "North"

Calle Grillo Road extending south from Avenue S to Barrel Springs Road; and

Between City Ranch Road and Avenue R-8 (if City Ranch Road aligns with Rayburn Road).

The preliminary alignments shown on Figure 4-6 were determined based on existing topographical and environmental constraints, cost estimates and parcelization, however these alignments are still conceptual and final alignments will be based on further engineering and design studies. A full discussion of the focus area analysis is contained in the *Avenue S Corridor Area Plan Access/Circulation Analysis*.

Actions:

Ref.	Action	Responsible Party	Time Frame
4.26.	Finalize collector road alignments.	Benefiting property owners and Public Works Dept.	Ongoing
4.27	As development occurs, reserve right-of-way and/or require proportional share of collector street improvements from project developers.	Future developers and Planning Dept.	Ongoing

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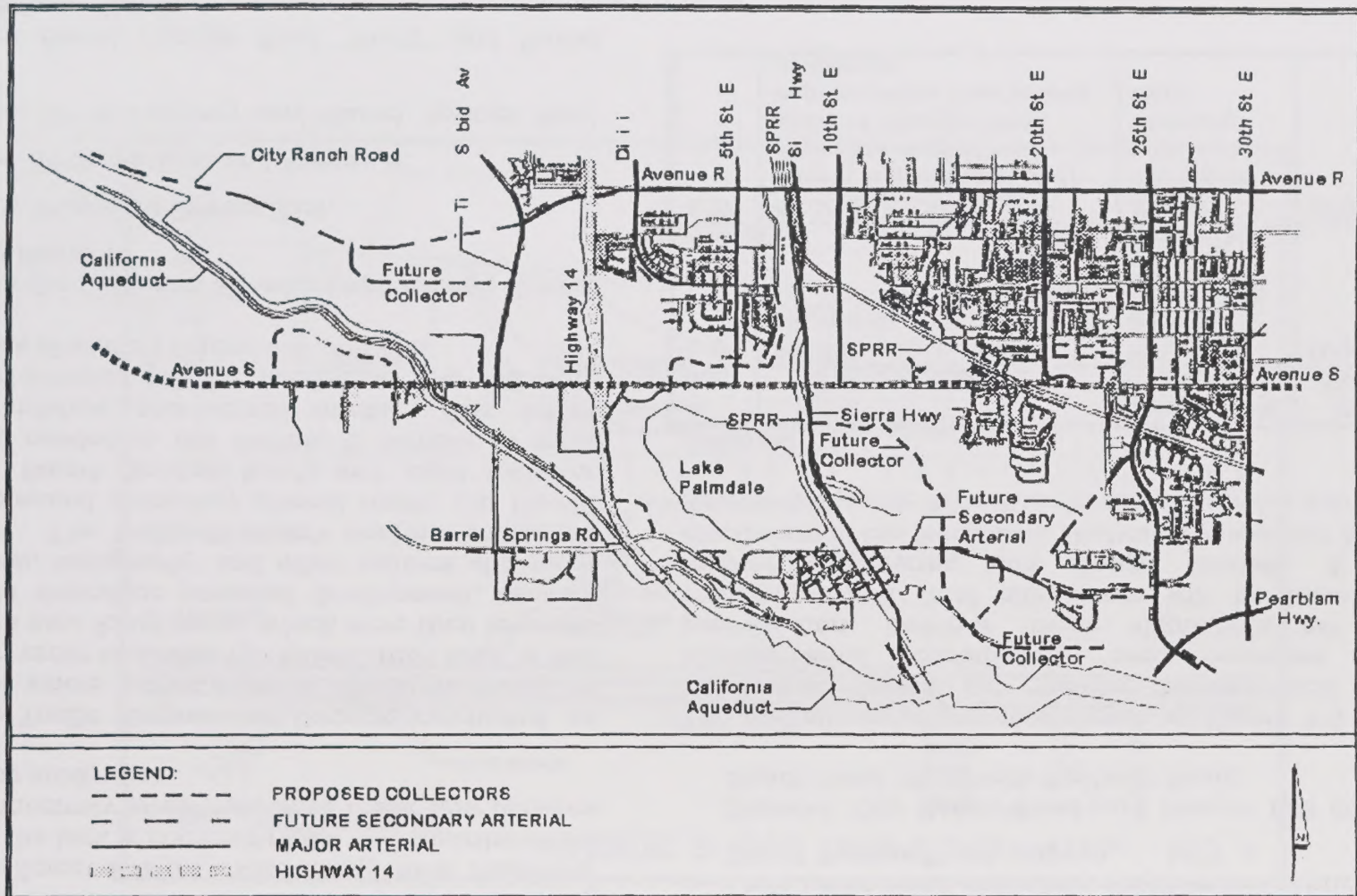


Figure 4-6: Proposed Collector Roads Within the Avenue S Corridor

Source: City of Palmdale Traffic Engineer

4.3.2 Bikeways and Trails

General Plan Goal C3. Encourage use of non-vehicular transportation throughout the Planning Area.

ASCAP Objective C10: Provide a system of trails and bikeways within the planning area.

Discussion: The pipeline easement located along the south side of Avenue S provides an opportunity to develop a continuous off-street bikeway throughout the planning area and extending to the east (see Figure 2 5). The cross-street profile shown in Figure 4-3 and in Photo 4-4 provides an example of how a ten-foot wide, Class I bikeway can be designed within the 114-foot right-of-way planned for Avenue S.

Actions:

Ref.	Action	Responsible Party	Time Frame
4.28.	Seek funding sources, such as County grants, MTA, ISTEA, for bikeway and trail construction.	Planning and Public Works Depts.	Ongoing
4.29	As development occurs, obtain rights-of-way or easements for trails and bikeways.	Future developers and Planning Dept.	Ongoing
4.30.	Seek permission from DWR to permit bicycle use on the access road along the California aqueduct.	Planning Dept.	1998 and ongoing

Ref.	Action	Responsible Party	Time Frame
4.31.	Seek to obtain an easement for construction of a multi-use trail adjacent to the aqueduct.	Planning Dept. and local trails group	1998 and ongoing
4.32.	Seek permission to construct an off-street bikeway within the existing Gas Company easement along the south side of Ave. S.	Planning Dept.	Ongoing



Photo 4-4: This photo shows the wide setback on the south side of Avenue S where a future bikeway can be constructed.

Source: City of Palmdale Planning Dept.

4.3.3 Transit

General Plan Goal C2: *Reduce the number of trips and vehicle miles traveled by individuals within the Planning Area, to meet regional transportation and air quality goals.*

ASCAP Objective C11. Provide for increased transit services through the Avenue S Corridor

Discussion: AVTA regularly assesses transit demand throughout the Valley and adjusts their routes to accommodate the highest ridership with their available resources. As development within the study area continues, a greater demand for transit services will follow

Commuter transit demand is expected to increase in the future, requiring more park and ride facilities within the City; however no additional park and rides are currently planned for the Avenue S Corridor

Bicycle parking facilities are needed at employment centers, retail shopping centers, schools, parks and transit centers. These facilities consist of both open bicycle racks of many design types and enclosed lockable bicycle storage units. In many cases, the lack of sturdy well located bicycle parking facilities leads to the locking of bicycles along fences, light standards, sign posts and other objects.

Actions:

Ref.	Action	Responsible Party	Time Frame
4.33.	Coordinate with AVTA to assure that transit demand can be met within the Avenue S Corridor	Public Works Dept.	Ongoing
4.34	Provide transit facilities, including benches and shelters along future transit routes within the study area.	Planning and Public Works Dept.	Ongoing
4.35.	Provide bicycle parking facilities consisting of both open bicycle racks and enclosed lockable bicycle storage units, at employment centers, retail shopping centers, schools, parks and transit centers park and ride facilities.	Planning and Public Works Dept.	Ongoing

Two miles east we passed the few remaining houses that had comprised Old Palmdale as it was now called. It had been the original settlement but had lost its identity when the railroad came through. Years later the wagon track road was to be surveyed and run on the straight line it now follows, and ranches came into being along the way. When I first remember traveling the road there was nothing between Old Palmdale and the bridge over Little Rock Creek.

Ruth E. Kinsman

Source: Antelope Valley History

5. Chapter 5 Infrastructure Needs in the Avenue S Corridor

5.1 What are the Infrastructure Needs in the Avenue S Corridor?

In order to serve the future development envisioned in Chapter 3, the extension of backbone infrastructure systems and trunk lines to the vacant portions of the planning area will be required. The term “infrastructure” refers to the public improvements and physical support systems necessary to support a community such as water lines, water storage reservoirs, sewer facilities, electrical and natural gas lines, flood control and drainage systems, fire protection and law enforcement. This chapter will discuss the infrastructure requirements necessary to support the land uses proposed in Chapter 3. Streets, highways, trails and other components of the circulation system are discussed separately in Chapter 4.

To assist in determining future infrastructure needs along the Avenue S Corridor the City hired an engineering consultant, Willdan Associates. Willdan reviewed the existing infrastructure systems for water and sanitary sewer and determined where sewer and water lines would need to be extended to serve future demand. Their report, *Avenue S Corridor Water and Sewer Infrastructure Study, Preliminary Feasibility Report*, is available for review at the City Planning Department.

The City’s General Plan requires that any new development must be supported with adequate infrastructure. If physical or monetary constraints limit the extension of infrastructure into an area, then the land use and zoning plans should reflect development types that require less infrastructure, such as rural residential. In this way development can occur without causing undue impacts to existing development, infrastructure systems, or the natural environment. Concurrent planning for infrastructure and land use is especially important in areas where little development has occurred, such as the west end of the Avenue S planning area. Proper infrastructure planning in this area can ensure that trunk lines are placed in a logical manner to serve many properties, ensure that costs for facilities are equitably shared by those who benefit from the improvements, and that infrastructure systems are provided in a timely manner to serve development as it occurs.

There were no electric or water lines in Palmdale at this time either. We used kerosene lamps for light, cooked and heated with wood stoves, and got our drinking water from a well located just west of 8th Street East and north of Palmdale Boulevard, known as Pike Moore’s Well. An open irrigation ditch ran along the west side of our property, so we got our water to wash clothes, dishes, etc. out of that.

A. Earl Jones

Source: Antelope Valley Pioneers

Section 5.2 will discuss the existing systems for sanitary sewers, water drainage facilities, dry utilities (electrical, gas, telephone and cable), fire protection, law enforcement and schools, and explain the opportunities and constraints for expanding those systems to meet anticipated service levels. Section 5.3 sets forth the plan for providing the infrastructure necessary to serve the planning area.

5.2 Existing Conditions, Opportunities and Constraints for Infrastructure

5.2.1 Sewer

Existing Sewer Conditions: Wastewater generated within the City of Palmdale is treated by Los Angeles County Sanitation Districts, with District #20 serving most of the City of Palmdale. Some developed areas on the west side of the City are served by the wastewater treatment plant in Lancaster operated by L.A. County Sanitation District #14. In addition to the treatment plants, the Sanitation Districts support and maintain the main trunk sewer lines (12" or larger) that serve the City.

The eastern end of the planning area is generally well served with sanitary sewers. Trunk lines in 5th Street East, 10th Street East, 20th Street East and 25th Street East currently conduct wastewater from existing development along the Avenue S Corridor to the Palmdale treatment plant. All existing trunk lines,

shown on Figure 5-1 are flowing at less than 40 percent of capacity (see Table 5-1).

Sewer Opportunities and Constraints: In the 1993 General Plan update, the City adopted a policy which requires all new multiple family commercial and industrial development, and all new single family residential development on lots less than one acre, to connect to a public sewer system. Because of this policy extension of sewer lines into all portions of the planning area will be required to support any uses other than rural residential development. However of all infrastructure necessary to support development in the Avenue S Corridor provision of sanitary sewer to the project area has proven to be the most challenging. The topography of the planning area is highly variable, with elevations ranging from 2,720 feet near the intersection of Casa Verde Drive and Avenue S to 3,200 feet at the west end of the planning area. Verde Ridge, to the north of the project area, forms a topographic barrier between the portion of the project area around Lake Palmdale and the Freeway and the developed land to the north. This terrain causes difficulty in designing a gravity-flow sanitary sewer facility to serve a large portion of the project area. Development on the western and eastern portions of the Avenue S Planning area can be served by extending gravity flow sewers to the north. However a large area in the center of the planning area will be difficult to serve with a gravity sewer (see Figure 5-7).

In their analysis, Willdan identified and analyzed two engineering alternatives to provide sewer to the central

Table 5-1.

Capacity of the Existing Trunk Sewers

Name	Location	Size	Design Capacity (Mgd)	Peak Flow (Mgd)	Percent of Design Capacity
Trunk C Relief	Avenue P-4 and 10 th Street West	21 39"	4.3-19.3	0.3	7%
Division St. Trunk	Division Street between Avenue Q and Palmdale Blvd.	12"	2.6-2.9	0.5	19%
5 th Street East	5 th Street East, between Avenue Q and Avenue R 12	10" 12"	1 1.9	0.1-0.7	10%-37%
10 th Street East	10 th Street East, between Avenue Q and Avenue S	10"	1.5-2.5	0.2	13.3%
20 th Street East	20 th Street East, Avenue R and Lasker Avenue	12" 15"	1.8-3.5	0.2-0.7	11%-20%
25 th Street East	25 th Street East, between Avenue R and Avenue S	10" 12"	1.0-1.6	0.3	19%-30%

Mgd=million gallons per day

Source: Willdan Associates

portion of the project area, neither of which is recommended for various reasons. Under one concept, Willdan proposed a sanitary sewer force main and lift station along the alignment of Avenue S. A lift station is a large pump which lifts the wastewater over the terrain through a pressurized pipe (referred to as a force main) until it reaches an elevation point where gravity can take over and direct the wastewater on its downstream path.

Under normal day to day conditions, lift stations do not result in adverse environmental impacts; however in the event that the pump failed, either by an interruption in its power supply or by mechanical failure, then the wastewater material which is within the force main will seek equilibrium. The material may leak out at the lift station or flow back through the sewer lines and outlet either through man-holes or into homes. Therefore,

there is an environmental risk related to a system which incorporates a lift station and force main to provide sewer service. The lift station alternative is of further concern because its optimal location is directly adjacent to both Lake Palmdale and the San Andreas fault. This reservoir holds a significant portion of the City's drinking water supply; any wastewater spill at this location would have the potential of contaminating the water supply in the lake. Should the fault rupture near the lift station, it is likely that either the lift station would fail or the force main would rupture, possibly affecting the water quality within Lake Palmdale.

A second alternative examined by Willdan was to construct a gravity flow sewer which ran deep under ground beneath Verde Ridge. Five deep routes were

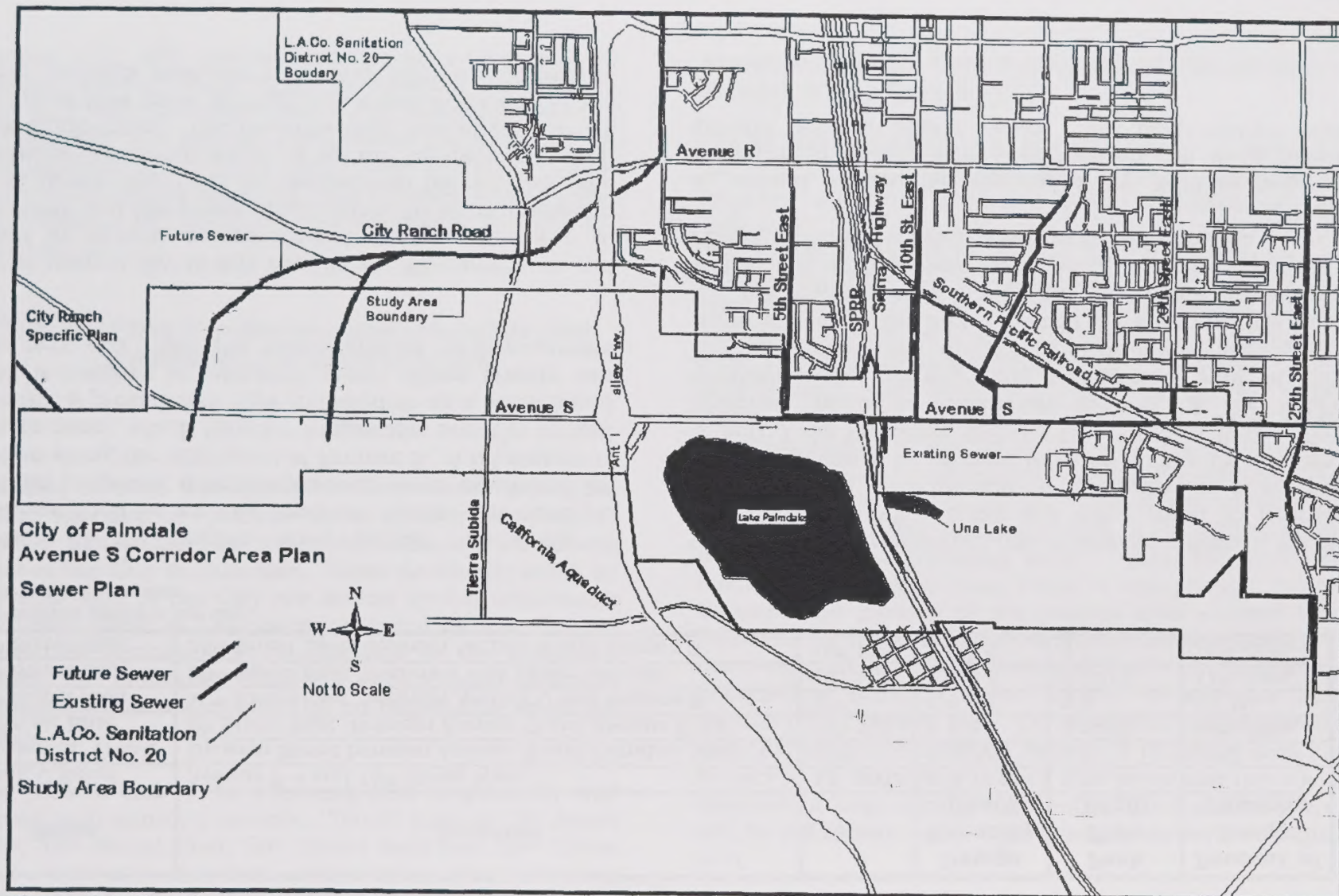


Figure 5-1. Existing and Future Sewer Lines

Source: Willdan Associates

analyzed. Of the routes analyzed, three were located within 200 feet of Lake Palmdale, in proximity to the San Andreas Fault. Palmdale Water District has expressed concern regarding the proximity of a sewer line to the lake. This concern is echoed by the State Health Department which confirmed that sewer line placement within 200 feet of the lake would likely be restricted because the lake is a major source of potable water for the City. Therefore, although these three sewer alignments can be designed from an engineering perspective, they do not appear feasible, given the environmental and health concerns raised by the Palmdale Water District and the State.

The two other gravity sewer routes analyzed by Willdan also cross the San Andreas Fault; however they are located farther from the lake shore. One route follows the southern boundary of the City's Avenue S Park and Ride lot, passes beneath the lot to Avenue S, and proceeds east on Avenue S to 5th Street East. The average depth of this line is 31 feet, and at its deepest point located along Avenue S, the line is 54 feet deep. Compared with the City's standard design depth of seven feet, the depth proposed for this alignment would be excessive.

The final route also requires an excessively deep line. This route, which follows Avenue S along the entire alignment, would require the sewer line to be as deep as 63 feet. Although an engineered design can be prepared for both routes, there are practical and safety difficulties in constructing and maintaining a sewer at this depth.

First, construction of a deep sewer line would be challenging. In order to withstand the pressure of the overburdening soil, the pipes would have to be constructed of a special material (ductile iron or concrete encased vitrified clay pipe), which would add to the cost of construction. Additionally because of the depth, specially designed man-holes would need to be installed to accommodate OSHA requirements. Finally maintenance of the sewer at this depth would be very costly and neither the City nor the Sanitation District would likely accept this responsibility. Therefore, at the present time, the provision of a sanitary sewer system linking the central portion of the planning area to the Palmdale Treatment Plant appears to be highly constrained.

It has been suggested by some of the property owners that a small sewer treatment plant could be constructed within the planning area to treat wastewater generated from development in that portion of the Avenue S Corridor. Under this scenario, the cost of building and maintaining the package treatment plant and trunk lines would be borne by the benefitting property owners. Since this alternative was not evaluated by the City's consulting engineers, the cost and feasibility of the idea has not yet been evaluated. Ongoing maintenance of a private sewage treatment plant must be guaranteed, to protect water quality in the vicinity of Lake Palmdale as well as for general health, safety and welfare. If not properly maintained, odors can be problematic near these facilities. While this alternative would not be the City's preferred solution to the sewer issue, the City will

evaluate any such proposal made by the affected property owners and will cooperate in any reasonable method of providing sewer to the area.

In other portions of the planning area, the extension of sanitary sewers is more feasible. Figure 5-1 shows the potential alignments of these main trunk line extensions. The sewer treatment plant which serves most of the planning area is located north of Avenue P near 30th Street East (see Figure 5-4). The capacity of this facility was recently expanded to accommodate up to 15 million gallons per day (mgd) of effluent, and the plant currently treats 7.9 mgd. Therefore, this facility has enough capacity to accommodate future development within the planning area.

5.2.2 Water

Existing Water Infrastructure: Based on their analysis of the existing water distribution system in the Avenue S planning area, Willdan Associates concluded that in the area east of the freeway most main water transmission lines are adequate to serve the undeveloped areas, and only additional water storage facilities will be required to support future development proposed under the land use concept described in Chapter 3. On the west side of the freeway however only minimal water infrastructure has been constructed. The low density residential development anticipated for this area will require additional water transmission lines, as well as new water storage facilities. Figure 5-2 Main Line Water Map, was

prepared by Willdan to show existing and proposed water lines, based on population and growth projections within the Avenue S Corridor Planning area.

Most of the planning area is within the jurisdiction of Palmdale Water District; however a small portion is within the jurisdiction of Los Angeles County Waterworks District 40 and the far west end, near City Ranch Specific Plan, is not within any water district boundary (see Figure 5-2). Although the boundary of County Waterworks District 40 encompasses a small portion of the planning area, the agency has not yet extended any infrastructure to serve that property.

Palmdale Water District, which serves most of the planning area, has developed an extensive infrastructure network within the planning area to treat and deliver potable water. These existing water facilities include a water treatment plant located at the southwest corner of Sierra Highway and Avenue S. Lake Palmdale, the water reservoir which holds much of the City's drinking water supply is located immediately south and west of the treatment facility. In addition, several large tank reservoirs are located within the planning area, and Palmdale Water District will soon begin construction of another storage reservoir and pumping station north of Avenue S, west of the Union Pacific Railroad. Main water transmission lines exist within portions of Avenue S, Cemetery Road, 5th Street East, Sierra Highway, Guyon Avenue and 10th Street East.

Palmdale Water District's treatment plant, located at the southwest corner of Avenue S and Sierra Highway has the capacity to treat up to 28 million gallons per day according to the District's 1996 Water Facilities Master Plan. District Manager Dennis LaMoreaux has indicated to the City that, because of seismic constraints, there are no plans to significantly expand the capacity of this treatment plant facility. However a second treatment plant is planned on 47th Street East, near the California Aqueduct.

To provide adequate water pressure to all customers, water districts establish service zones based on elevation. Within the planning area, Palmdale Water District has constructed facilities within three service zones: 2,800 ft., 3,000 ft., and 3,200 ft. In order to provide service to the properties which are within the southwestern-most portion of the planning area, new service zones, with supporting water storage tanks, booster pumps and water mains, will need to be established.

The planning area is traversed by the California Aqueduct, a source of untreated State Water Project water for the local water suppliers (see Photo 5-1). Palmdale Water District has a turnout, where untreated or "raw" water is drawn from the aqueduct, south of Lake Palmdale. Another turnout is located on the City Ranch Property; however no water is currently being diverted through that outlet. Should the City Ranch Specific Plan begin development, raw water from the aqueduct may be used for construction watering, dust control and landscape irrigation.

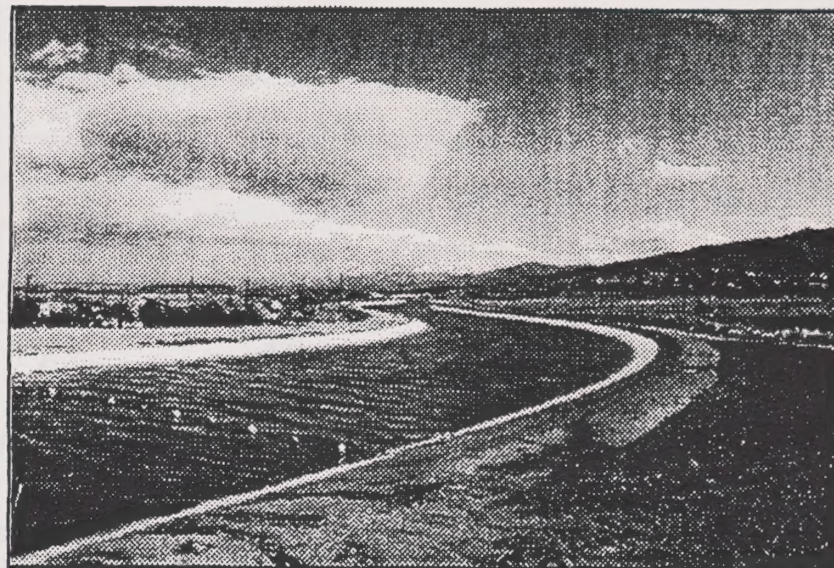


Photo 5-1. View of the California Aqueduct at the west end of the study area

Source: City of Palmdale Planning Dept.

Water Opportunities and Constraints: Expansion of water infrastructure to serve future development will be required. Because of the extent of infrastructure that will need to be developed, this expansion will be costly; however there do not appear to be any physical or environmental constraints to limit water infrastructure development, such as those identified with respect to provision of sanitary sewers. Table 5-4 shows projected costs for providing water service to vacant properties within the planning area. These costs are in addition to the connection fees charged by Palmdale Water District, which fund the Master-planned water system improvements installed by the District.

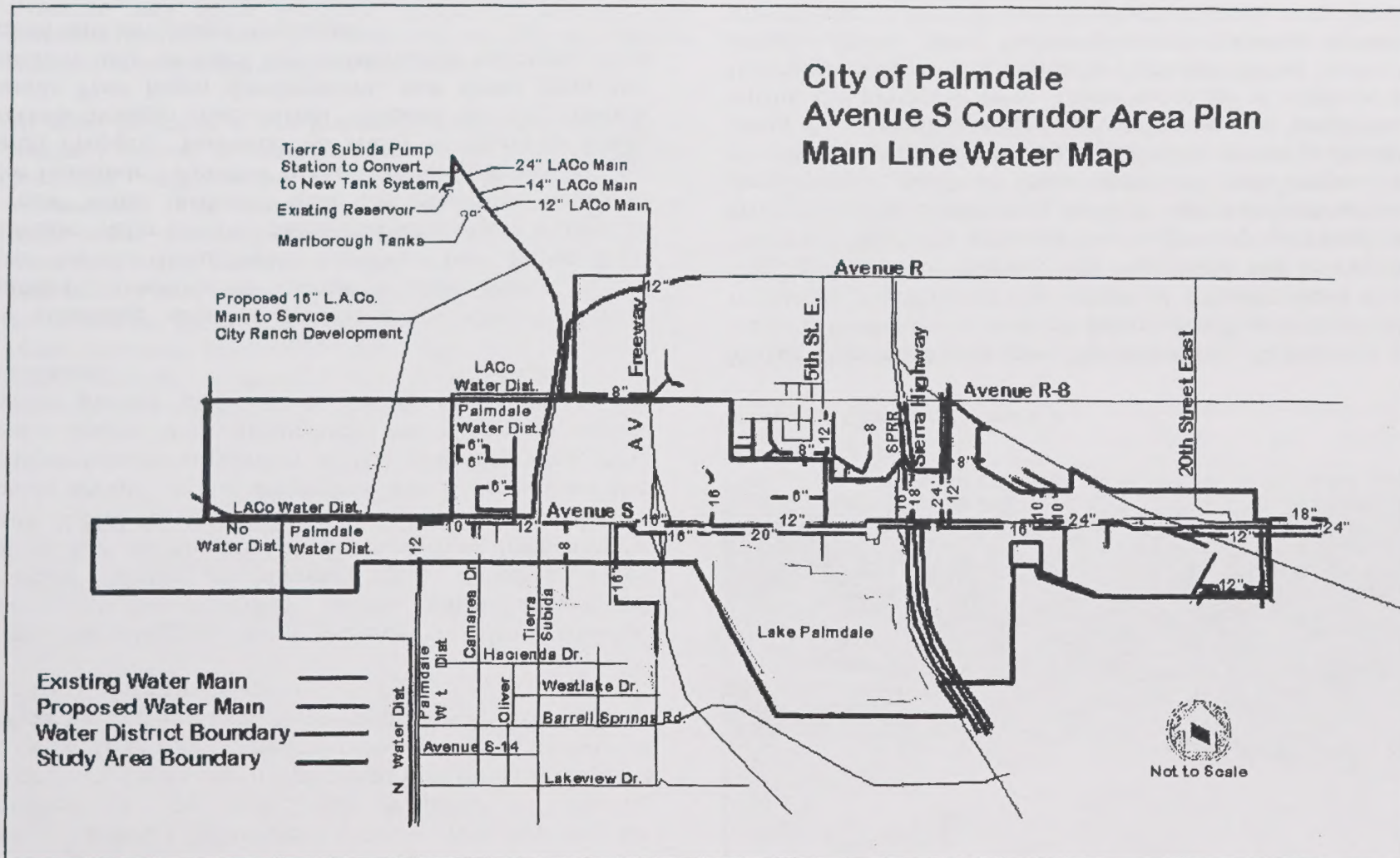


Figure 5-2: Existing and Future Water Mains

Source: Willdan Associates

Protection of surface water quality General Plan Goal ER4 encourages the protection of local water quality and quantity a goal which is shared by the local water purveyors. In order to protect the water quality of Lake Palmdale, Palmdale Water District required an adjacent developer to construct an interceptor ditch to divert runoff from upstream developed properties away from Lake Palmdale. The ditch is intended to keep urban pollutants, such as oils, pesticides, animal waste and trash and debris, from entering the lake and contaminating this important source of drinking water

The interceptor ditch runs along the western and southern edges of Lake Palmdale. Flows are conveyed east under Sierra Highway to a swale south of Una Lake. Outflow from this area runs easterly toward Old Harold Road and 25th Street East. As development continues near the lake, additional measures may be warranted to divert contaminated surface water flows from entering the lake.

Similarly as discussed in Chapter 3 care will be needed to ensure that future development does not introduce contaminants to the lake through other paths, such as soil leachate and groundwater. Therefore, this plan recommends restrictions on certain commercial uses, such as gas stations, near the lake.

Relocation of Water Lines. In order to widen and improve portions of Avenue S, relocation of existing water transmission lines will be necessary. These lines, which range in size from 10" to 20" in diameter are owned by Palmdale Water District, which has authority

to establish location and design criteria for their relocation. Willdan has estimated that the costs for relocating these lines will exceed \$600,000 which would be borne by either the developers of Ritter Ranch and/or City Ranch Specific Plans, the City or any financing entity formed by the City as part of the road improvement project. Because the Water District has "prior existing rights, they will not have to bear costs associated with moving this infrastructure.

5.2.3 Drainage Facilities

Existing Drainage Infrastructure: The planning area is split between two watersheds: the Anaverde drainage basin, and the Pearland drainage basin. The western portion of the planning area is located within the Anaverde basin, where most of the planned drainage facilities will occur upstream on the Ritter Ranch and City Ranch properties. The Anaverde Flood Control Basin, located north of the project area at the intersection of Tierra Subida and Rayburn Road is currently under construction as a joint use detention and play field facility. Phase I of the basin/soccer complex opened in September 1997 and Phase II for expansion is currently in design.

The eastern portion of the planning area is within the Pearland drainage basin. Where the planning area and the Pearland drainage basin boundaries overlap only local flood control improvements serving individual tracts have been constructed. A large drainage basin is

planned near Old Harold Road and 25th Street East; however the basin has not yet been constructed. Throughout the City storm water tends to flow northeast along the natural grade. However in the study area, the terrain creates localized drainage patterns that may differ. The California Aqueduct traverses the planning area, forming a barrier to the natural flow paths of several watercourses. Siphons and cross drainage structures convey the runoff from the south, across the Aqueduct.

Drainage Opportunities and Constraints: The City's Master Plan of Drainage envisions an extensive network of flood control basins, drainage channels and underground pipes to convey storm water runoff through the City. Within the planning area, this network of flood control facilities has not yet been fully developed. As development along Avenue S progresses, each developer will be obligated to provide flood control facilities to reduce storm water runoff to no more than 85% of the amount of water that flowed from the property before it was developed (its pre-developed condition). Because development creates impervious surfaces, such as driveways, roofs and sidewalks, where rain can not penetrate the ground, more water runs off of a developed site than in its pre-developed condition.

Developers usually reduce storm water flows from their property by installing small flood control basins on-site, or contributing to the construction of large, regional flood control basins that are planned elsewhere within the City.

No constraints to the implementation of the City's Master Drainage Plan have been identified through this planning process. As development occurs, the City will place conditions on each development request to require each developer to comply with the existing City requirements concerning drainage and flood control.

5.2.4 Dry Utilities

Public utility and service providers for the planning area are shown in Table 5-2. These utilities are readily available in the developed portions of the planning area. Electrical substations which serve the Avenue S Corridor are located on City Ranch Road near the Palmdale Landfill, and at Vincent Station (south of the planning area on Sierra Highway). Within the planning area, major electrical transmission lines run along Avenue S from the City Ranch property to Tierra Subida, and then north along Tierra Subida. Another line extends along Avenue S from east of the planning area to 20th Street East, then north on 20th Street East (see Figure 5-3). These lines are too large to feasibly relocate underground. As seen in Photo 5-2, above-ground electrical and telephone service lines are located throughout the planning area, servicing development which occurred prior to the implementation of the City's Utility Undergrounding Ordinance.

The City maintains franchise agreements with Jones Intercable to provide cable service for City residents, and with Palmdale Disposal for residential trash service.

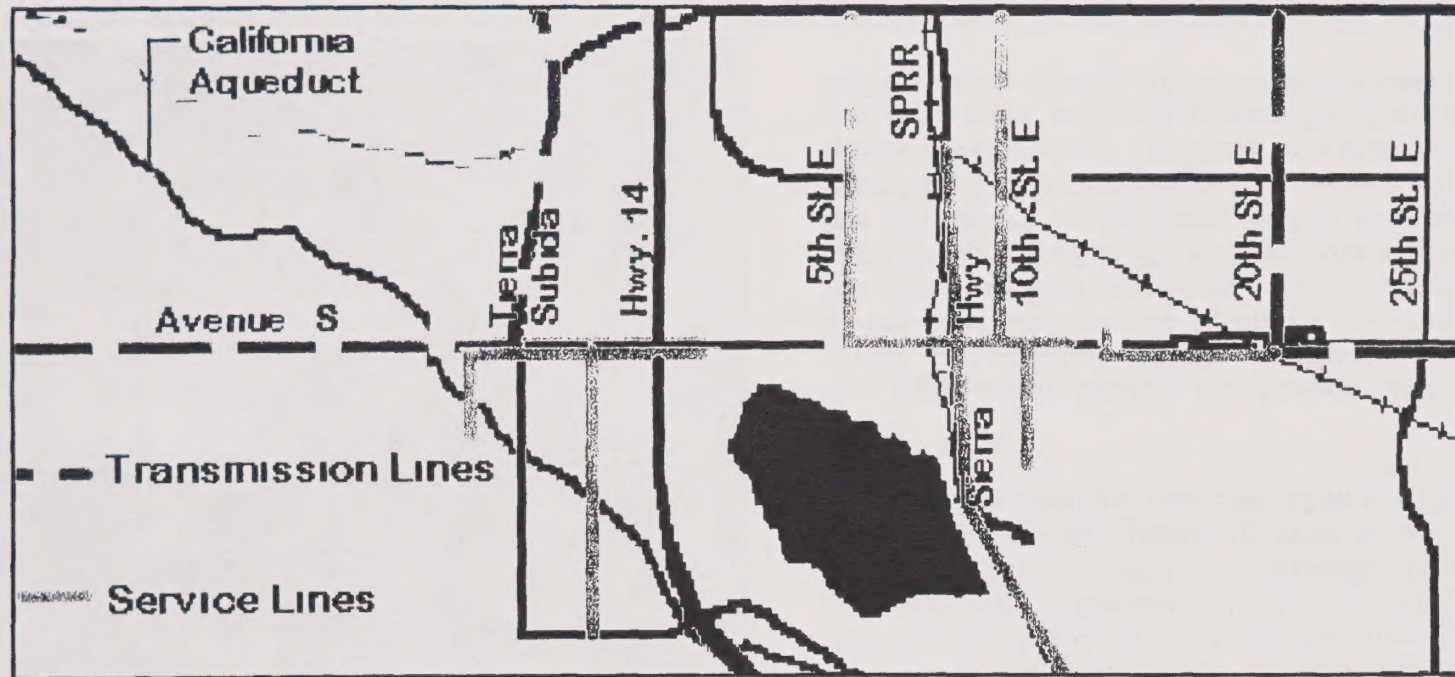


Figure 5-3: Overhead Electrical Transmission Lines and Telephone Service Lines

Source: City of Palmdale Planning Dept.

Table 5-2:

Utility Service Providers

	Servicing Agency
Telephone	Pacific Bell
Electricity	Southern California Edison
Gas	The Gas Company
Cable	Jones Intercable
Refuse	Palmdale Disposal

Dry Utility Opportunities and Constraints: The City is not a utility provider; therefore future developers will need to consult with the servicing agencies listed in the Table 5-2 to arrange for extending utilities to vacant properties. In general, the utility providers will extend service immediately before or during construction of a development project. The cost of these service extensions are usually borne by the developer in addition to any other fees or charges assessed by the utility for reviewing or preparing utility plans or

connecting service. Other than the costs to the developers, there are no physical constraints to extending dry utilities to serve the study area. The City's Undergrounding Ordinance will require that new infrastructure be installed underground, rather than on power or telephone poles.

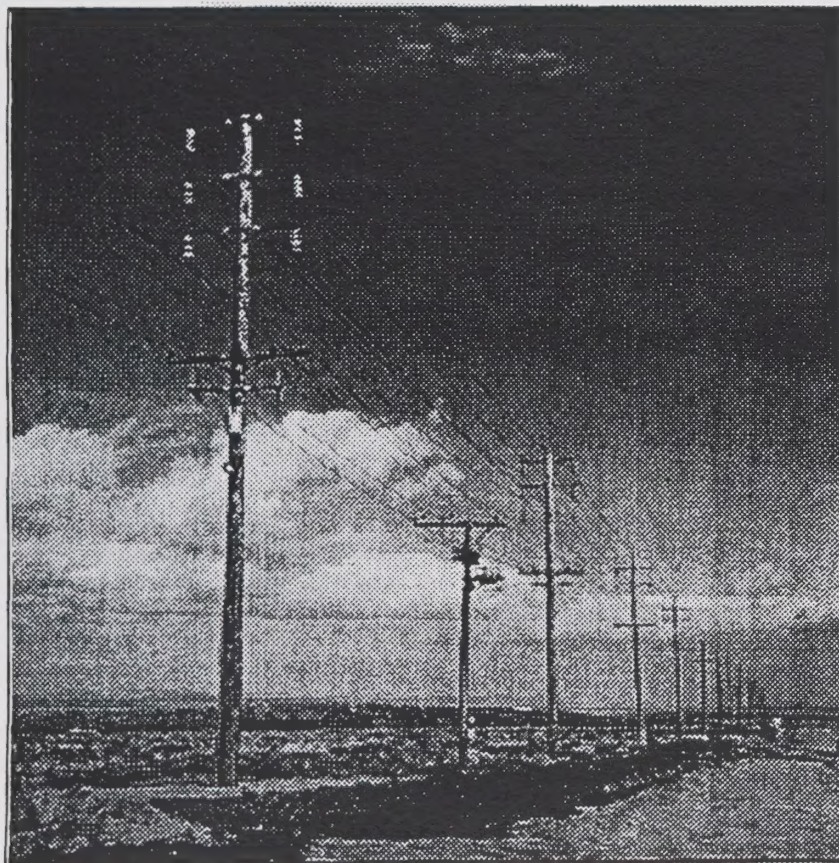


Photo 5-2: View of above ground power poles at the west end of the study area

Source: City of Palmdale Planning Dept.

5.2.5 Public Services

All portions of the planning area are currently served by the Los Angeles County Fire Department, the Los Angeles County Sheriff's Department, and both Palmdale School District and the Antelope Valley Union High School District. These agencies provide important public services to the residents and property owners within the planning area, as well as the City as a whole. Figure 5-4 shows the location of public service providers throughout the community including parks, recreational facilities and civic buildings.

Fire Protection. The City of Palmdale contracts with the Los Angeles County Fire Department (L.A.F.D.) for fire services. Because each fire station has its individual service area with specific boundaries, the Avenue S Corridor planning area is served by three different fire stations, Nos. 24 37 and 131 (see Table 5-3).

The permanent facility for Station 131 is currently under construction at the northwest corner of 27th Street East and Avenue S, about one half mile east of the planning area boundary. This station, expected to open in Spring of 1998, will improve response times of fire personnel to locations within the planning area, providing better fire protection service to existing and future development. Until the new station is completed, the personnel and equipment for Station 131 share facilities with Station 37 on 9th Street East.

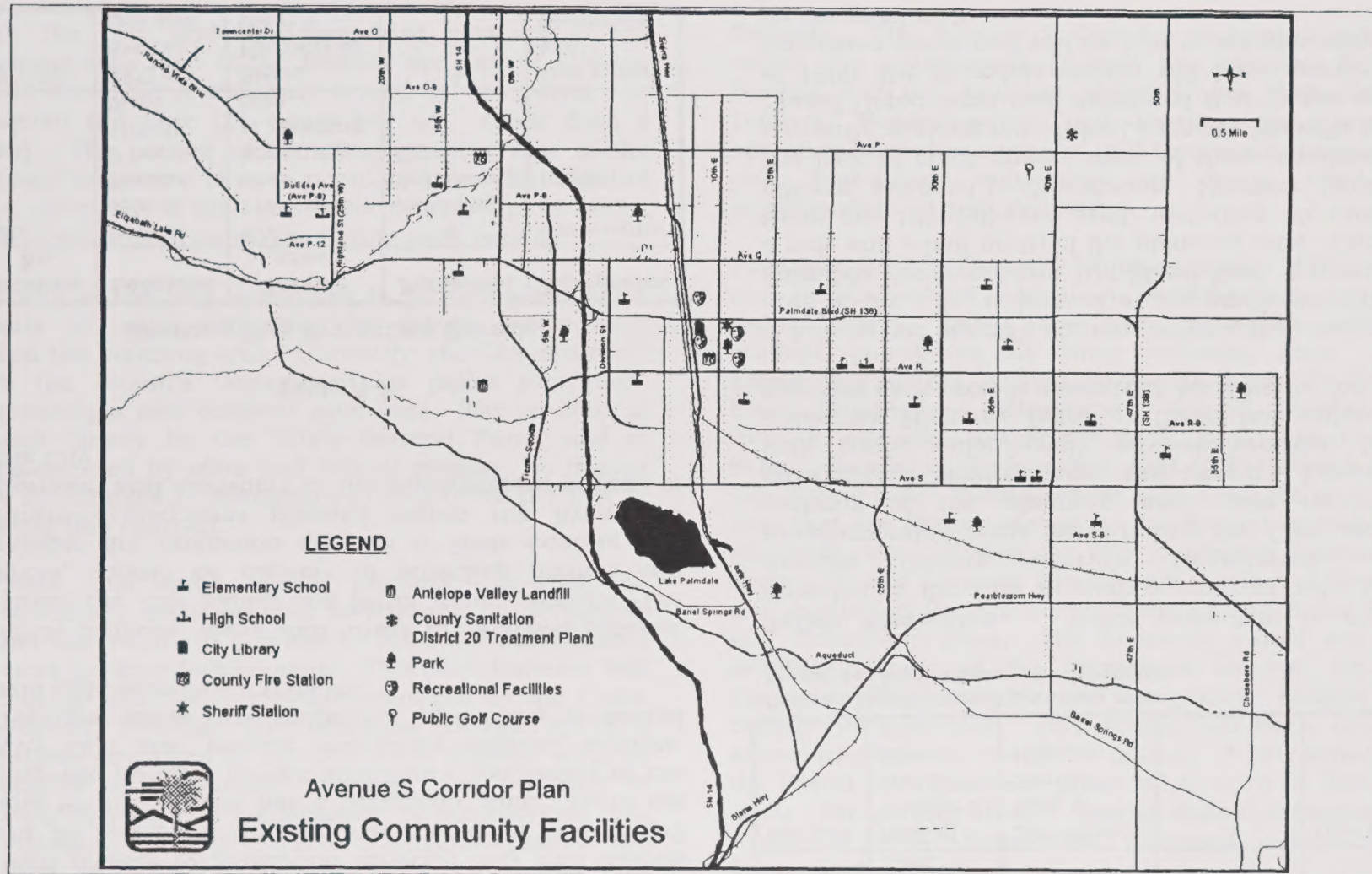


Figure 5-4: Existing Community Facilities

Source: City of Palmdale Planning Department

In total, 16 fire personnel, including the Battalion Chief, equipped with three fire engines and one truck, are assigned to serve the planning area at any given time. With respect to paramedic services, only Fire Station No. 39 located at the southeast corner of Avenue Q-9 and 9th Street East has a paramedic unit. There are also two licensed private ambulance companies in the City that also provide emergency medical services. Together these two companies have thirty personnel and eight ambulance vehicles.

These facilities, along with future fire stations planned within the City Ranch and Ritter Ranch Specific Plan areas, should be capable of providing prompt and reliable fire protection services to both existing and future development planned within the Avenue S Corridor and elsewhere in the southwestern portion of the City

Table 5-3:

Existing Fire Protection Services

Station No.	Location	Service area*	Personnel	Equipment
No. 24	South side of Avenue P west of 10 th St. West	A.V Freeway to west boundary of planning area.	8, including Battalion Chief	One engine and one truck.
No. 37	SEC of Avenue Q-9 and	Sierra Highway to the A.V	5	One engine and paramedic

Station No.	Location	Service area*	Personnel	Equipment
	9 th Street East.	Freeway		services.
No. 131	NEC of Avenue S and 27 th Street East.	20 th Street East to Sierra Highway	3	One engine.

*Within the Avenue S planning area

Source: Los Angeles County Fire Department

Police Protection. Police protection is currently provided to the City through a contract with the Los Angeles County Sheriff's Department. The unincorporated areas surrounding the City including portions of the planning area, also receive law enforcement services from the Sheriff's Department, with traffic enforcement services provided by the California Highway Patrol. These law enforcement agencies each provide emergency back-up for the other

A full service sheriff's station, serving the incorporated area of the City is located at the southeast corner of Palmdale Boulevard and 10th Street East, approximately a mile and a half north of the planning area. Currently there are 120 full-time staff, including 86 uniformed officers, assigned to this station. However because of the lack of office space, some of these employees are currently working out of the Lancaster Sheriff's Station. Sheriff Department staff estimated that by the summer of 1998, the Palmdale station will have completed its expansion plans and will be able to accommodate all of its assigned staff.

Both the City and unincorporated portions of the planning area west of the freeway are part of a larger patrol area that is currently served by one patrol car assigned full time (24 hours per day seven days a week). The portion of the planning area east of the freeway because it is more populated, is within a patrol area served on a full time basis by three patrol cars, with an additional patrol car during peak periods.

Funding is the only constraint to providing the same quality of police protection for future development within the planning area. Currently the City contracts with the Sheriff's Department for police protection, negotiating a new contract each year. The contract is funded largely by the City's General Fund, and is supplemented by state and federal grants. No impact fees are charged to developers to help cover the cost of funding this contract.

Because this issue affects property city-wide, no extraordinary measures will be required by developers within the Avenue S Corridor to fund law enforcement services for their developments. This plan, however will encourage that the concepts encouraged by the Crime Prevention Through Environmental Design (CPTED) principals developed by the City of Los Angeles, such as defensible zones around buildings, and provision of security lighting and landscaping, be incorporated into the design of future projects constructed within the corridor to reduce opportunities for crime, which in turn, will reduce law enforcement costs.

Schools. The Avenue S Corridor is located entirely within the jurisdictions of both the Palmdale School District and the Antelope Valley Union High School District. Schools within both Districts are currently operating at or over capacity and temporary classrooms and year-round schedules are being used to accommodate current demand.

Palmdale School District, which oversees elementary and middle school education (kindergarten through eighth grade), serves the planning area's current student population at three schools: Palm Tree Elementary School, located at Avenue R and 2nd Street East; Tumbleweed Elementary School, located at Avenue R-4 and 10th Street East, and Mesa Middle School, located on Avenue R-8, east of 32nd Street East (see Figure 5-4). Future school sites near the planning area that are already owned by the District include the Anaverde site, located at the northwest corner of Avenue R and Division Street, and the Barrel Springs site, located at the northeast corner of 25th Street East and Columbine Drive. The Anaverde school site will eventually serve as the permanent location for the Learning Plaza, which is temporary housed at Summerwind School. This school will be a magnet school which serves the entire district. A new school on the Barrel Springs site is projected to open in January 2000. Temporarily Barrel Springs School is located on Avenue S at 40th Street East, sharing a campus with Buena Vista School.

Palmdale School District has formed a Mello-Roos District to assist with financing of new school facilities. This financing mechanism will be applied to future developments within the planning area to mitigate the impact of new residential development on the elementary and middle schools. New residential development will also be subject to payment of school impact fees to the High School District, at the rates established by state law

According to District staff, all six of the Antelope Valley Union High School District's high schools are operating at or over capacity. The two high schools which currently serve the planning area are Palmdale High School, located at Avenue R and 20th Street East, and Highland High School, located at 25th Street West and Avenue P-8 (see Figure 5-4). According to District staff, both of these schools are completely impacted, operating at 150% of capacity. Any new development would further impact these two schools, and attendance area boundary adjustments would be utilized to shift students to other high schools. Although the district owns sites where new high schools could be developed, construction funding is not currently available and these sites are several miles from the Avenue S Corridor Planning Area.

Any new development will further exacerbate the problems currently facing both school districts. However, development density on residentially designated property within the planning area is being reduced through this planning effort, which will result

in a reduced student population at buildout from that previously anticipated under the General Plan.

5.3 The Infrastructure Plan for the Avenue S Corridor

The General Plan Public Services Element provides guidance in developing the infrastructure plan for the Avenue S Corridor. Goals PS1, PS2, PS3 and PS5 will serve as the basis for this plan. Objectives which are specific to the Avenue S Corridor Plan have been developed to further refine the implementation of these goals within the planning area.

In the following sections, the various components of the infrastructure plan for the ASCAP are set forth. Each section begins with the applicable General Plan Goal, shown in italics. Objectives for implementing these goals within the ASCAP follow and are further explained in the Discussion sections. Within these discussions, implementation measures are summarized as specific actions that are to be performed by various responsible parties, either on an ongoing basis or within certain time frames.

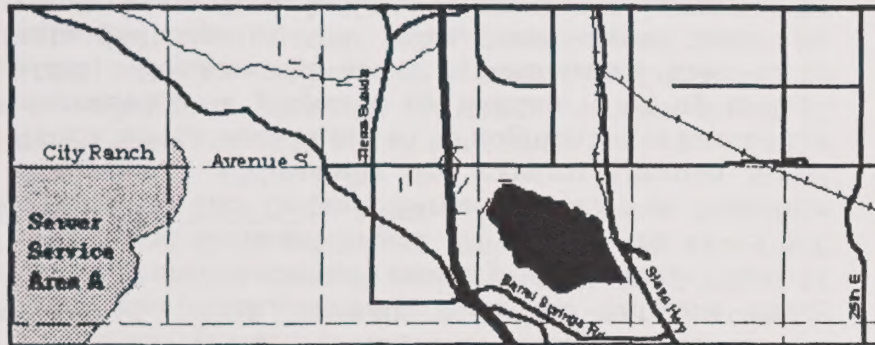


Figure 5-5: Sewer Service Area A

Source: Willdan Associates

5.3.1 Sewer Plan

General Plan Goal PS2: *Ensure that all development in Palmdale is served by adequate water distribution and sewage facilities.*

ASCAP Objective II. Provide adequate sanitary sewer facilities within to serve future development within the planning area.

Discussion. The City's General Plan contains several policies regarding the provision of sanitary sewers to serve proposed development. In particular Policy PS2.2.4 is applicable to this project area because it establishes a requirement that most new development must connect to a public sewage system, rather than to individual septic systems.

As part of their study Willdan performed an analysis of future sewer requirements for the planning area. In order to conduct this analysis, Willdan divided the planning area into seven zones along watershed boundaries. The recommendations for each sewer service area, A-G are discussed below

Sewer Service Area A. As shown in Figure 5-5, Area A is the shaded area located on the far west end of the planning area, adjacent to the previously approved City Ranch Specific Plan area. The portion of Area A located south of Avenue S is proposed for low density residential development (1 dwelling unit/acre). If one acre lots or larger are developed, then septic systems may be feasible. However north of Avenue S or where clustered development is proposed, sanitary sewers will be required to serve future development. Any sewers constructed in this area will ultimately connect to the sewers proposed in the City Ranch development which in turn will connect with the Sanitation District Trunk C Relief Sewer at Avenue P-4 and 10th Street West.

Willdan has estimated a cost of up to \$390,000 in order to serve this portion of the planning area with sanitary sewers; however development of residential lots of one acre or larger may reduce this cost or eliminate the need to construct this segment of sanitary sewer altogether

Sewer Service Area B: Service Area B is located in the western portion of the planning area, as shown on Figure 5-6. This area is presently undeveloped, with the area south of Avenue S proposed for low density



Figure 5-6: Sewer Service Area B

Source: Willdan Associates

residential development (1du/ac) and the area north of Avenue S proposed for slightly higher density development of 0-3 du/ac. Because of the higher density north of Avenue S, sanitary sewers will be required to serve that portion of the planning area. Due to the area's topography future alignment of sewers will go north, through two under-crossings beneath the California Aqueduct to Anaverde Creek. The sewers will follow the creek, converge near the Antelope Valley Landfill and continue easterly underneath the 14 Freeway to Division Street. Ultimately the sewer will connect to the Division Street Trunk, near Palmdale Boulevard. Additionally the existing Division Street Trunk Sewer would need to be augmented to handle the increased flow projected by Willdan to be up to 3.15 MGD. Because the sewer system would need to be extended up to 2.5 miles, the capital cost for constructing these facilities is significant, estimated by Willdan to be \$2,245,000.

Sewer Service Area C: Sewer Service Area C covers the portion of the project area surrounding the Avenue S/14 Freeway interchange (see Figure 5-7). This area, which includes Lake Palmdale, contains the lowest elevation points within the planning area. Verde Ridge, trending northwest to southeast, effectively cuts off this portion of the project area from the valley floor. Although two alternatives to extend a sewer to this area were analyzed by Willdan Associates, neither was found to be feasible at present. Therefore, most of this sewer service area will be recommended for low density residential development (LDR) and the flatter properties closest to the freeway will be recommended to be designated as SD (Special Development). This designation will require that the property owners conduct future engineering studies to determine an appropriate route and/or design for a future sanitary sewer to serve this area. Any future sewer plan will have to be reviewed and approved by the City Engineer.

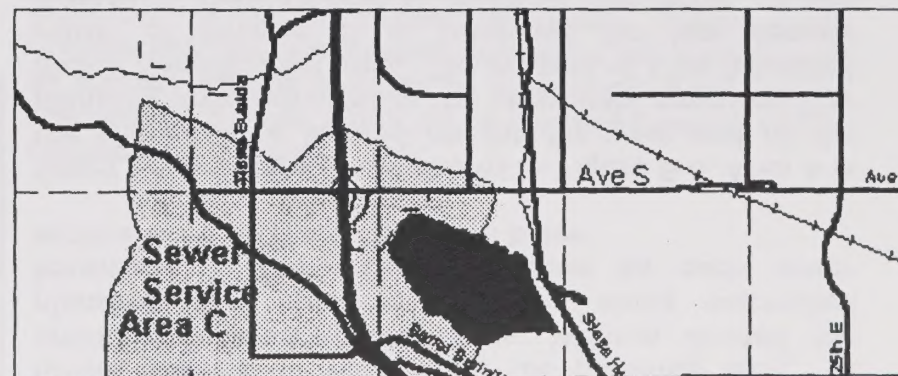


Figure 5-7: Sewer Service Area C

Source: Willdan Associates

and the Sanitation District, and Palmdale Water District will need to review the proposal to ensure that there will be no significant potential for contamination to the drinking water stored in Lake Palmdale.

Sewer Service Area D: In order to provide sewer service to Area D shown on Figure 5-8, trunk lines will need to be extended to the existing sewers located in 5th Street East and 10th Street East from the project site. The cost to extend the trunk sewer lines to serve this area is estimated by Willdan to be \$390,000. Because the area surrounding Una Lake is slated for very low density development, it is not anticipated that trunk lines will be extended south on Sierra Highway past the parcels proposed for neighborhood commercial uses. The very low density residential uses in this service area not constrained by high ground water will be served by individual septic systems.



Figure 5-8: Sewer Service Area D

Source: Willdan Associates

Sewer Service Areas E, F and G. The eastern portion of the planning area is divided into three Sewer Service areas: Area E, Area F and Area G. These areas drain to existing sewers in Lasker Avenue and Avenue R-4 and in 25th Street East. The new lines necessary to serve undeveloped areas are estimated by Willdan to cost \$760,000. Based on the proposed residential densities which exceed one dwelling unit per acre, private septic systems will not be permitted in these areas.

Actions:

Ref.	Action	Responsible Party	Time Frame
5.1.	Ensure that sewer lines are adequately sized to accommodate future development demand	City Engineer Reviewing Authority Sanitation District.	Ongoing
5.2.	Assist property owners to identify a sewer alignment for Service Area C which protects the water quality in Lake Palmdale	City Engineer Palmdale Water District., Sanitation District	Ongoing
5.3.	Assist with financing of sewer improvements by formation of assessment districts or other public financing entities where feasible and desirable.	City Engineer City Council	Upon request by affected property owners

ASCAP Objective 12: Ensure that adequate water infrastructure is constructed to serve future Avenue S Corridor development.

Discussion: In evaluating the water demands for this project, Willdan consulted with the Palmdale Water District which is responsible for approximately 80% of the project area, and Los Angeles County Waterworks District which provides service to a small portion of the planning area. The far southwest portion of the planning area is not served by any water purveyor (see Figure 5-2); therefore, this area will need to be annexed to a water district prior to any development occurring.

Table 5-4 was developed by Willdan to estimate the cost of providing water service to the undeveloped portions of the planning area. In order to conform to the infrastructure design requirements set forth by Palmdale Water District, the length and size of these lines are based on possible scenarios of servicing each undeveloped area with looped systems. Because these water lines are branch lines rather than main transmission lines, they are not necessarily shown on Figure 5-2. The water infrastructure depicted in Table 5-4 is provided only to estimate approximate costs for future developments, and it is not intended to reflect actual water system requirements, which can only be determined when specific development projects have been identified. Requirements for future projects in the areas will be determined at the time they are submitted to the appropriate water agency for review. However, Table 5-4 indicates that provision of on-site water service to the planning area's undeveloped parcels will

be costly, estimated at over \$1.9 million. Future developers of vacant parcels served by these branch lines will also pay connection fees and other capital costs charged by the applicable water district to pay for future facilities shown on Figure 5-2, over and above the costs shown in Table 5-4.

Palmdale Water District funds new transmission mains and storage facilities needed to provide a "backbone" for the distribution system through the Capital Improvement Fee. According to the District, the costs are distributed so that every new service connection pays a portion of the costs and is not required to fully fund any project identified in the Master Plan.

If the street improvements planned in the Circulation Chapter require the relocation of any existing water lines, then the costs for relocating those lines will be borne by the entity constructing the street improvements. Improvements to Avenue S west of the freeway may be constructed by the developers of the City Ranch and Ritter Ranch Specific Plans, who are obligated to construct and widen the road pursuant to their respective development agreements. Otherwise, the City or possibly a financing district formed by the City would likely be the entity to carry out street improvements, and would therefore bear the cost of relocating existing infrastructure affected by the street improvement. The Water District would have the authority to review improvement plans for the relocated water lines and direct the location and materials for the new pipes.

Table 5-4
Individual Future Water Facilities

Size And Tie-In Location	Cost
10" Line off 20 th Street East to Avenue S	\$58,000
12" Line from Avenue S to Cemetery Road	40,000
Extend 12" line from Avenue S to the existing lines on Cemetery Road and/or lines to the south along Thistle Avenue	86,400
8" line off 20 th Street East from Avenue S	28,000
10" tie through from Sheffield and Avenue S	60,000
8" line off Avenue S	13,600
three 12" lines off 10 th Street East	44,000
12" lines off Avenue S, Sierra Highway and/or 10 th Street East	77 600
10" lines off Sierra Highway	20,000
8" lines between Sierra Highway and existing lines behind the old hospital site	117,600
8" lines from Avenue S	16,000
10" line from Avenue S tied into existing lines at Avenue R-8	115,000
8" line off Avenue S	36,800
8" line off Avenue S	13,600
10" line from Avenue S to Sports Center	115,000
8" line at Geiger	36,000
8" line at 7 th Street West	36,000
8" line from Geiger to Avenue S	54 400
10" line off Avenue S	199,000
8" line off Avenue S	10,000
10" lines off Avenue S	185,000
10" line from new source to exist. Tovey Rd. Line	170,000
Pump station/well	400,000
TOTAL ESTIMATED COST	\$1,915,000

Source: Willdan Associates

Any development applications near Lake Palmdale would be forwarded to the Palmdale Water District for their review and comment. Any facility or development which has the potential to affect the quality of the water within the lake will undergo scrutiny by the City and the Water District would be given an opportunity to comment on the proposed development. Restriction of certain uses, or the imposition of strict conditions of approval, to protect the quality of the water in the Lake could result through the environmental and development review processes for such applications.

Actions:

Ref.	Action	Responsible Party	Time Frame
5.4	Ensure that those portions of the planning area which are not located within a district boundary are annexed to the appropriate water district.	LAFCO Water Districts, Reviewing Authority	Ongoing
5.5.	Ensure that each development project provide adequate on-site water lines which meet the standards set forth by the applicable water district.	Reviewing authority Water Districts	Ongoing
5.6.	Construct appropriate storage and delivery infrastructure to support future water demand.	Water Districts	As needed

Ref.	Action	Responsible Party	Time Frame
5.7	Ensure that adequate fire flows and pressures are maintained throughout the planning area	Water Districts	Ongoing
5.8.	Consult with Palmdale Water District prior to relocating any existing water lines.	Engineering Dept.	As needed
5.9	Review planned development adjacent to Lake Palmdale and restrict and/or regulate any uses which have the potential to impact water quality	Planning Dept., Reviewing Authority	Ongoing

5.3.2 Drainage Plan

General Plan Goal PS3: Develop and maintain adequate storm drainage and flood control facilities.

ASCAP Objective I3: Construct adequate flood control facilities to accommodate storm water flows along the Avenue S corridor

Discussion: The runoff in the upstream Anaverde watershed will be handled by systems of debris basins, storm drains and channels to convey runoff northerly and easterly beneath the California Aqueduct, through existing cross drainage facilities and eventually to

Anaverde Creek. Drainage improvements will be needed where Anaverde Creek flows beneath Tierra Subida to safely convey the peak storm water flow to the proposed regional Anaverde Flood Control Basin.

The City's Master Plan of Drainage shows that runoff within the Pearland watershed for the Avenue S Corridor planning area will be conveyed to the proposed Barrel Springs Basin located east of Old Harold Palmdale Road north of Barrel Springs Road. From the Barrel Springs Basin, storm water will ultimately be conveyed north via a system of storm drains and detention basins until it reaches Lancaster or unincorporated County areas to the north, where those agency's drainage facilities accept these flows.

According to current engineering design standards adopted for development throughout the City all future development projects along the Avenue S Corridor will need to provide adequate on-site drainage facilities, or provide funding for expansion of regional facilities, to accommodate the increase in storm water runoff generated by their development. This increase in storm water is caused by the increase of impervious surfaces, which are any areas where rainwater can not penetrate the ground, such as roofs, sidewalks and paved areas. Improvements such as flood control basins, culverts, drainage pipes and dry wells can divert storm water which drains off of these impervious surfaces to appropriate locations, thereby avoiding flooding of streets and low-lying areas.

Actions:

Ref.	Action	Responsible Party	Time Frame
5.10.	As set forth in the City of Palmdale Drainage Master Plan, require future developers to construct necessary drainage infrastructure to accommodate the increase in surface runoff generated by their development.	City Engineer Reviewing Authority	Ongoing
5.11.	Ensure that urban runoff is directed away from Lake Palmdale and Una Lake to protect their water quality	City Engineer Reviewing Authority Regional Water Quality and State and County Health Depts.	Ongoing
5.12.	Complete the Anaverde Basin project, including the drainage improvements beneath Tierra Subida Avenue.	City Engineer Public Works Dept.	1998-2000

5.3.3 Dry Utilities

General Plan Goal PS1. Ensure that adequate public services and facilities are available to support development in an efficient and orderly manner

ASCAP Objective I4 Ensure that adequate dry utilities are provided within the Avenue S Corridor to support existing and future development.

Discussion: Public utilities for the planning area are identified in Table 5-2. The City does not supply any of these utilities directly so each developer will need to work with the utility purveyors to provide the necessary infrastructure to his or her development. The costs for extending utilities to each vacant property will be the responsibility of the developer; therefore, the extension of these utilities will likely not occur until immediately before or during construction of future development projects.

The major transmission lines for natural gas which are addressed in previous chapters do not provide local service.

Actions:

Ref.	Action	Responsible Party	Time Frame
5.13.	Work with utility providers to ensure that adequate infrastructure is provided and that levels of service are maintained.	Utility providers, Reviewing Authority	Ongoing

5.3.4 Public Services

General Plan Goal PS5. *Support the provision of adequate public and community services to meet the needs of residents.*

ASCAP Objective I5: Ensure that adequate fire services are provided to the properties along the Avenue S Corridor

Discussion: With the completion of the new fire station (Station 131) at the northwest corner of 27th Street East and Avenue S, only one-half mile east of the study area, fire response times and service levels are expected to be adequate to serve existing and future development. The Los Angeles County Fire Department is funded through property taxes collected by the County; therefore as development in the corridor occurs and property values rise, then the Fire Department will receive more tax money to construct new facilities or fund new personnel or equipment.

Each development application will be required to meet Fire Department requirements concerning site design, installation of fire hydrants and building equipment, design and materials, as conditions of approval. The appropriate water districts will be consulted to ensure that adequate water pressure and storage is available to meet the Fire Department's standards for fire suppression.

Actions:

Ref.	Action	Responsible Party	Time Frame
5.14	Review development applications to ensure that Fire Department standards for site design, building design, and hydrant location and pressure are met.	Reviewing Authority Fire Dept.	Ongoing

ASCAP Objective I6: Ensure police protection along the Avenue S Corridor is provided at an appropriate level.

Discussion: The contract for with the Los Angeles County Sheriff's Department for provision of police protection within the City is reviewed annually in conjunction with the City's budget process. Through this yearly review process, service levels can be adjusted to ensure that adequate law enforcement efforts are provided to the planning area and throughout the City

Development applications will continue to be distributed to the Sheriff's Department in order to both inform the department of future development plans and to obtain comments and suggestions on project design features related to crime prevention. The concepts of Crime Prevention Through Environmental Design (CEPTED) will be incorporated in to all future development applications in the planning area, and elsewhere throughout the City to maximize the efficiency of law enforcement services.

Actions:

Ref.	Action	Responsible Party	Time Frame
5.15.	Review all development applications to ensure that CPTED concepts have been incorporated into their site design.	Reviewing Authority Sheriff's Dept.	Ongoing

ASCAP Objective I7 Work with Palmdale School District and the Antelope Valley Unified High School District to minimize the impact to schools from future development within the study area.

Discussion: At the present time, the School Districts which serve the study area are struggling to accommodate the students who reside within their jurisdictional boundaries. The land use plan proposed in Chapter 3 would reduce residential densities throughout the planning area by a considerable amount. This action will result in fewer students at buildout of the proposed plan than would have been generated by buildout of the land uses currently shown on the General Plan for the study area.

The City will continue to require developers to pay the maximum amount of school fees authorized by the State, in order to offset some impacts to schools caused by continued development within the planning area and throughout the City

Actions:

Ref.	Action	Responsible Party	Time Frame
5.16.	Require new development to annex to Palmdale School District's Mello-Roos District as a condition of approval.	Reviewing Authority	Ongoing
5.17	As a condition of approval, require that residential developers pay school fees as required by state law	Reviewing Authority	Ongoing

ASCAP Objective I8: Review all other public services to ensure that the Avenue S Corridor is being adequately served.

Discussion: Other public services which support existing and future development within the planning area include City parks, recreation facilities, and the City library. The ongoing operation of these facilities is funded through the City's General Fund. Park impact fees are assessed for residential development to help pay for the cost of acquiring or constructing new parks within the City. As development of the planning area continues, and property values and sales tax revenues increase, then the costs of providing City and County services to these new residents will be offset.

All developers are currently required to pay impact fees for parks, traffic and drainage. In the future, if the City adopts impact fees to cover the costs of providing other public services, then future developers in the project

area will be required to pay these fees as a condition of approval of their development. At the present time, however no general facilities or service impact fees are being assessed.

Actions:

Ref.	Action	Responsible Party	Time Frame
5.18.	Require that developers pay any impact fees adopted by the City Council as a condition of approval of their development, to help offset costs of providing public services.	Reviewing Authority	Ongoing

6. Chapter 6 Community Design Through the Avenue S Corridor

6.1 Why The Need For Community Design In The Avenue S Corridor?

Because a person's first and sometimes lasting impression of a community is based upon their initial visual experience, community design can be particularly important. The most recognizable aspects of a community's image are in its architectural styles and use of landscaping. Visual interest may be created by a variety of architectural styles and landscape themes within a community; however, too many different styles and themes within a single glance may create a jumbled vision of discordant images.

Most visitors and residents arrive in Palmdale at Avenue S, near the City's southerly boundary at the freeway. Before construction of the freeway, Sierra Highway and Avenue S were the primary entries or gateways to the City. In this Chapter, recommendations are provided on how the significance of these two intersections could be emphasized with distinctively designed entry monument signs and streetscapes that include native landscaping in the medians, street name signs and enhanced paving. Pleasing entries such as these create the impression that one has arrived somewhere special after a journey. The trip to the Antelope Valley along the 14 Freeway through the Soledad Canyon Pass opens onto views of Lake Palmdale and the great expanse of California's high desert. Continuing this dramatic

impression through a strong community design image, particularly at the entrances to the City, can leave a positive, lasting impression for both residents and visitors alike.

Architecture and landscaping can provide visually unifying elements throughout the Avenue S Corridor as well as add visual interest at entrances to the City. The Avenue S Corridor Area Plan creates an opportunity to establish a positive community image by developing an architectural theme that is based on the significance of the City's cultural heritage. To accomplish this, an understanding of the City's history is needed.

Chapter 2 describes how early pioneers traveled from the Midwest to settle the community known then as Palmenthal. These early residents brought with them an architectural style reflective of their German and Swiss ancestry that included gable roofs, long, wide porches and multi-paned windows. This early architecture can be used as a basis for establishing community design as well as a way in which to portray elements of the City's past. The intent of this chapter is not to limit architecture to a single theme or style. Rather, it calls for architecture to borrow certain elements from past and present styles found in Palmdale that will result in visually attractive buildings that are also reflective of the high desert environment.



Photo 6-2: Palmdale's first schoolhouse.

Source: City of Palmdale Planning Department

schoolhouse portrays the design and architecture similar to that of the Midwest during the late 1800's. The structure contains wood siding, a high pitched roof with gables and ornamental detailing along the base of the building and across the gables. The long porches and overhangs are also typical of early settlements throughout the Great Plains during this period.

Another example of the architecture of that time is found closer to today's civic center and shown in Photo

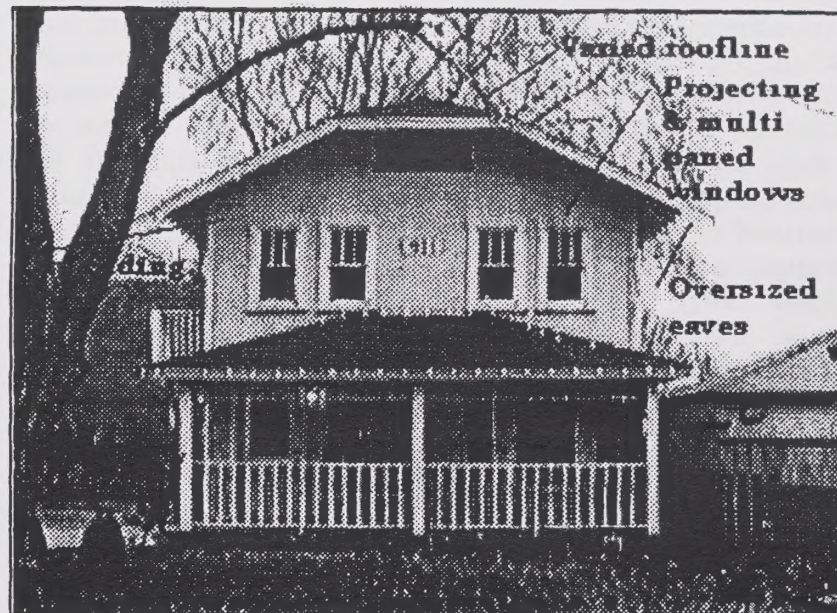


Photo 6-3: Existing structure exhibiting historical architectural characteristics. Circa 1930.

Source: City of Palmdale Planning Department

6-3. At 911 East Avenue Q-9 is a home which was built in the 1930's. The house has been renovated and now operates as a specialty retail shop offering hand made crafts and southwest art. The structure encompasses many of the characteristics that we have come to associate with the early settlement. For instance, the wood siding elevations, varied roofline with gables and eaves, multi-paned windows with projecting sashes and the incorporation of a covered porch are classic examples of early Palmdale architecture.

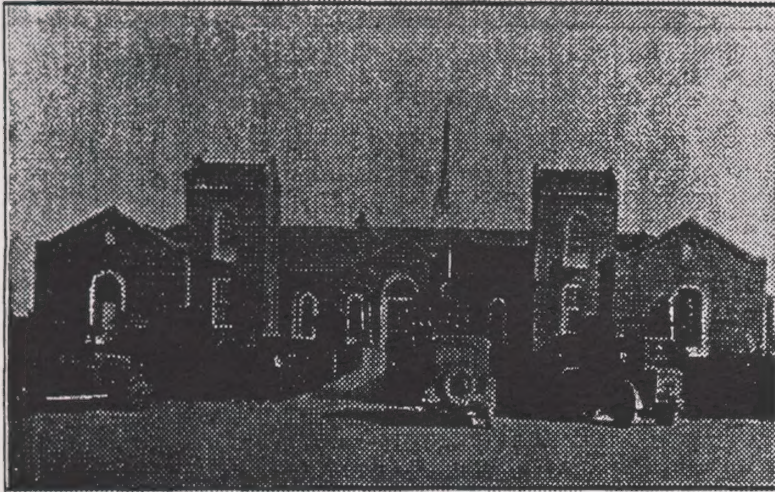


Photo 6-4: Palmdale Grammar School. Circa 1918-1919

Source: Palmdale City Library

The second schoolhouse, circa 1918-1919 and shown in Photo 6-4 was a two story brick building. Again the roof line was pitched and varied, similar to earlier designs, and the building included tower treatments. The windows and doors are arched rather than square and contain many small glass panes. These features are either recessed or projected to provide variation along the wall plane and outlined with a contrasting color to provide interest and variety from the primary building.

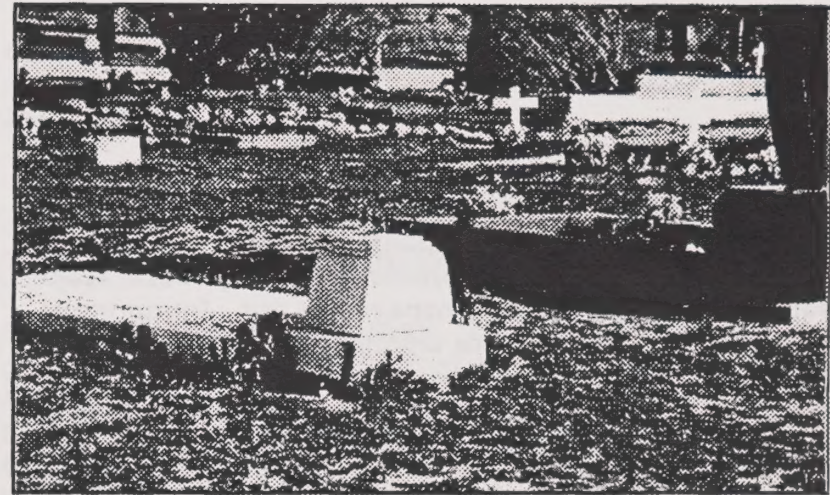


Photo 6-5: Marked graves at the Palmdale Cemetery

Source: City of Palmdale Planning Department

Another historical reminder of Palmenthal is the Palmdale Cemetery which can still be seen at its original location on 20th Street East, north of Avenue S. Although today Palmdale Cemetery encompasses less than the original 20 acres, there are over 180 marked graves and it is generally thought that there may be more graves within and outside the cemetery boundaries. As described in Chapter 2, a historical passive park is proposed to be developed at this location, surrounding the cemetery with walking paths, benches, native landscaping and interpretive signs which tell of Palmdale's history

The Southern Pacific Railroad also had a significant impact on this region, completing its line through the Antelope Valley in 1876. By studying the architecture of the railroad stations constructed along these lines, one can gain insight into one of the architectural styles used in early Palmdale. Many of the railroad stations utilized design elements such as wood siding, shaped eave supports, divided windows, pitched shingle roofs, gable ends, wood trims, roof ridge detailing support columns, and distinctive signage and lighting fixtures.

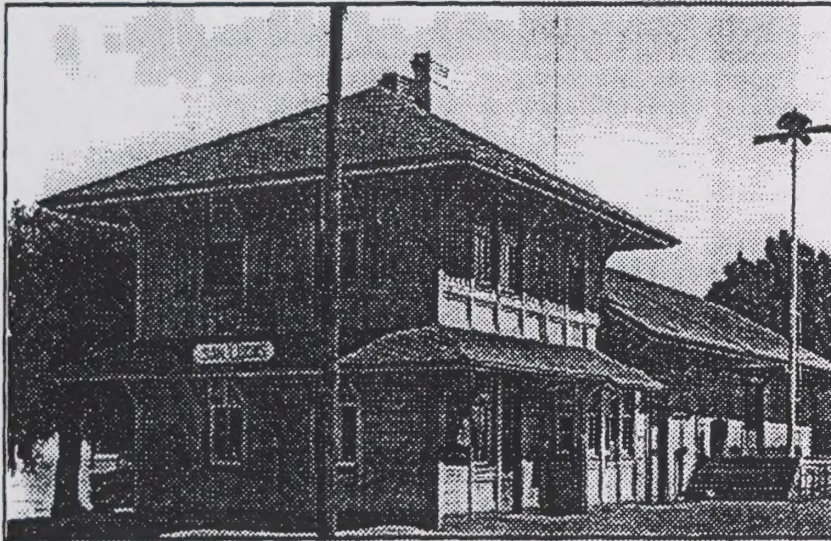


Photo 6-6: Railroad station located in San Lucas, CA.
Source: Southern Pacific Lines, Pacific Lines Stations Volume 1



Photo 6-7: Railroad station in San Pedro, CA.
Source: Southern Pacific Lines, Pacific Lines Stations Volume 1

The use of some of these features, including the varied roof line, wood siding, oversized eaves with visible wood braces, multi-paned window and door treatments of the railroad stations are shown in Photo 6-6 and Photo 6-7. Additionally the San Pedro railroad station provides a clear example of ornamentation along both the single-story and second-story ridgelines. Based on photographs of early Palmdale, this architectural style was similar to that used by first settlers here.

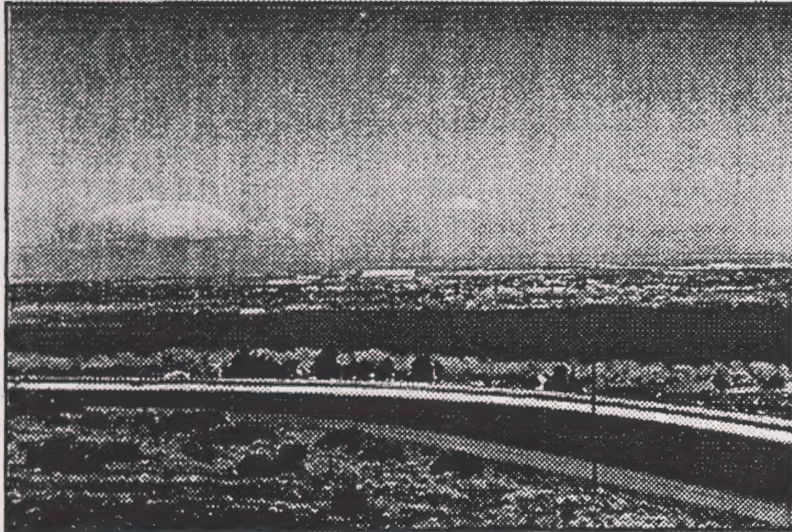


Photo 6-8: View of California Aqueduct, Lake Palmdale and Avenue S Corridor.

Source: City of Palmdale Planning Department

6.2 Existing Conditions, Constraints And Opportunities

The following sections describe existing conditions for various elements recommended for inclusion in this Chapter to create the desired image within the Avenue S Corridor. These elements include gateway entry treatments, enhanced streetscapes, and architectural design guidelines intended primarily for commercial areas. In residential areas, the major component of the streetscape is expected to be street trees within landscaped setbacks along arterial streets flanked by

subdivision perimeter walls, complemented by decorative bus benches and trash receptacles where appropriate.

6.2.1 Gateway Entrances Within The Avenue S Corridor

Avenue S/Freeway Gateway Because of the two City park and ride facilities located near the freeway along Avenue S, the Avenue S freeway ramps are some of the most heavily used in the City. As discussed in the Circulation Chapter, traffic along Avenue S is expected to increase significantly with build out of the City Ranch and Ritter Ranch Specific Plans. Use of the Avenue S/14 Freeway interchange will increase proportionately with these increased traffic volumes. Avenue S is also the first major off-ramp in the City for northbound travelers along the Antelope Valley Freeway. As such, the visual element of this intersection often provides visitors with their first glimpse of the City. However, because three of the corners of this interchange are not currently annexed to the City of Palmdale, there are currently no design features near this interchange which provide a gateway concept.

Photo 6-9 shows that the vacant area within the freeway right-of-way provides an opportunity to develop a gateway entry treatment that will influence the image of the City presented to Palmdale visitors and residents alike.

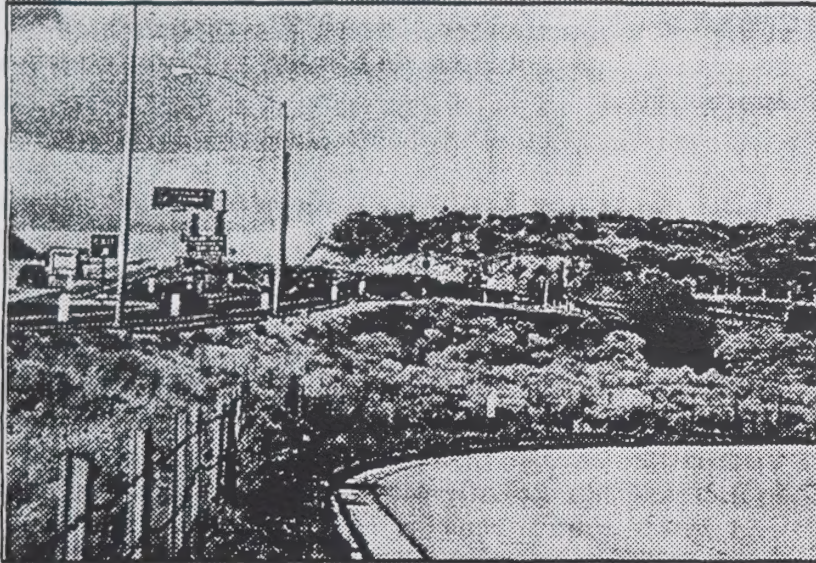


Photo 6-9: Avenue S northbound off-ramp.

Source: City of Palmdale Planning Department

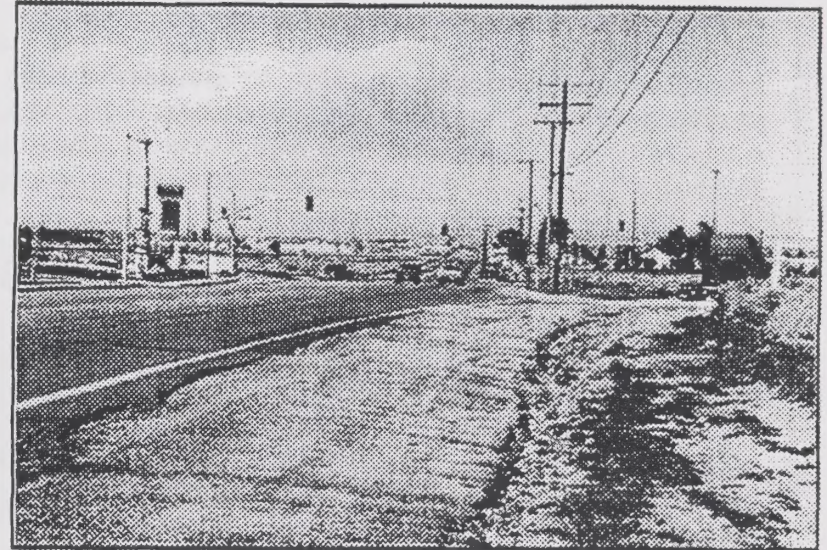


Photo 6-10: Intersection at Avenue S and Sierra Highway looking north.

Source: City of Palmdale Planning Department

Avenue S/Sierra Highway Gateway The intersection at Sierra Highway and Avenue S, which is designated for commercial uses, also presents an opportunity to create a gateway entry statement where none currently exists. The southwest corner of the intersection, which is still located in unincorporated County territory has already been developed with a small retail center convenience store and gas station. The remaining three corners, located within the Palmdale city limits, are currently vacant. The commercial land use designation will provide an opportunity to develop a distinctive gateway entrance to the City by facilitating development of a cohesive architectural and landscape design that will create a pleasing visual impact welcoming travelers to Palmdale.

6.2.2 Streetscapes Within The Avenue S Corridor

The term “streetscape” refers to the comprehensive view of a roadway and adjacent areas, which may include pavement material, light standards, trees and planters, median treatments, traffic signals, subdivision walls, street names, signs, curbs, seating areas, bus shelters, trash receptacles, and other similar features. Conversely a streetscape may also lack all of these amenities, and thus provide a barren or stark appearance to the viewer

Avenue S, Sierra Highway and Tierra Subida Avenue are all designated to be constructed as major arterial streets with medians at full buildout. The future medians will provide an opportunity for decorative paving or native landscaping that can significantly add to the aesthetic quality of the streetscape. In addition, both Sierra Highway south of Avenue S and Tierra Subida Avenue are designated as scenic highways on the City's General Plan, and Los Angeles County has designated the Antelope Valley Freeway south of Palmdale Boulevard as a scenic highway on its General Plan. Enhanced streetscapes will add to the scenic quality of these streets.

Avenue S. The Corridor planning area encompasses approximately four miles of Avenue S between the alignments of 20th Street West on the west and 20th Street East on the east. In the Circulation Chapter Table 4-1 details the existing improvements within the right-of-way along Avenue S. Improvements along Avenue S are currently minimal, consisting mostly of paved travel lanes with few curbs; sidewalks are provided mainly adjacent to newer development (see Photo 6-11). Within the fully improved segments of Avenue S, one permanent bus bench has been installed on the north side of Avenue S between 10th and 20th Streets East.

Today the most visible streetscape design elements within the Avenue S Corridor are located within landscaped setbacks bordered by subdivision perimeter walls. Walls and perimeter landscaping have generally been required along residential development backing

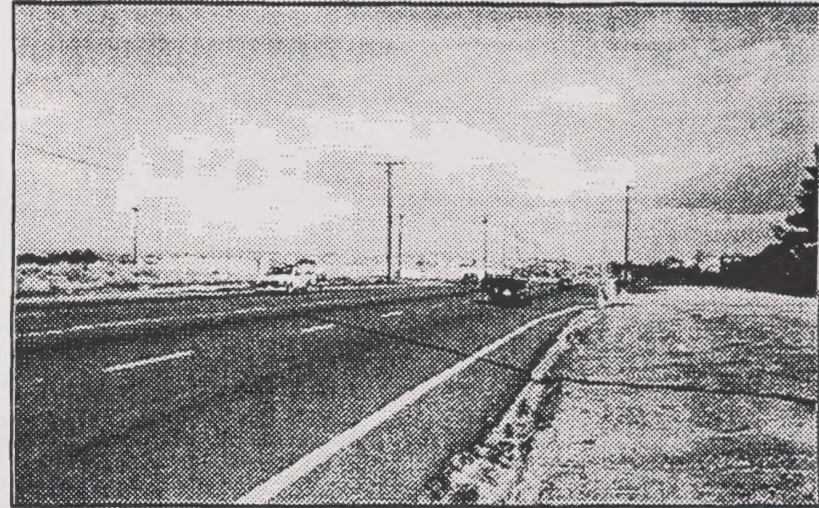


Photo 6-11. Avenue S streetscape, looking eastward from Sierra Highway

Source: City of Palmdale Planning Department

onto arterial streets throughout the City. As shown in Photo 6-12, a subdivision wall, only minimal street improvements and no landscaping were required by the County along an existing subdivision west of Tierra Subida Avenue. Subdivision walls along Avenue S primarily consist of concrete block with various types of decorative top treatment.

Because much of the land adjacent to Avenue S is presently vacant and undeveloped, the Avenue S Corridor Area Plan provides an opportunity to develop enhanced streetscapes as a part of future development that can result in a unifying theme of street trees, median treatments, bus benches, and other design features.

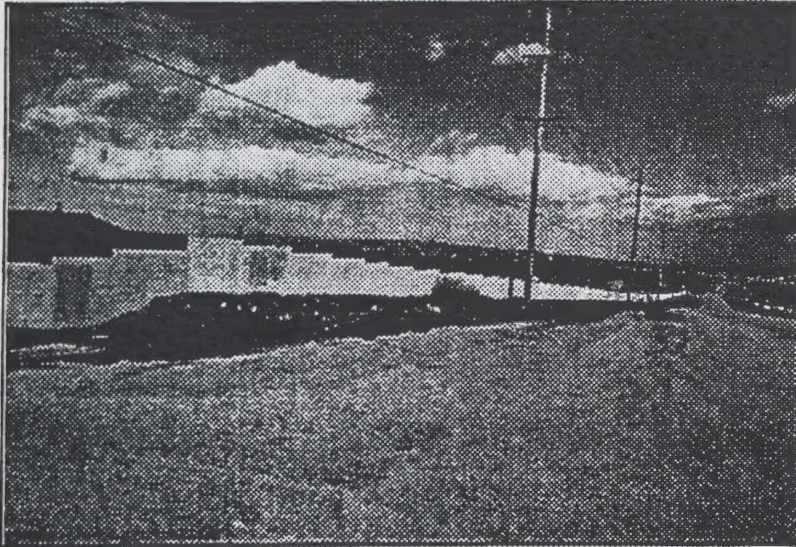


Photo 6-12: Subdivision wall along Avenue S west of Tierra Subida Avenue.

Source: City of Palmdale Planning Department

As described in the Environmental Conditions Chapter and depicted in Figure 2 5 a 100-foot wide gas line easement located primarily along the south side of Avenue S provides additional area in which to incorporate enhanced landscape treatments and an off-street bikeway within the setback area that can also become an integral part of the streetscape design.

Tierra Subida Avenue. The portion of Tierra Subida Avenue located within the planning area measures

three-quarters of a mile in length. This road, along with Sierra Highway provides a primary north-south circulation route within the planning area.

Street improvements along Tierra Subida Avenue are presently limited to roadway paving only (see Photo 6-13). There are no curbs, sidewalks, gutters, light standards, street trees or landscaping. Future development along this segment of Tierra Subida Avenue can be designed to contribute to an overall landscape and streetscape design theme and enhance long-range views of the valley floor along this scenic highway

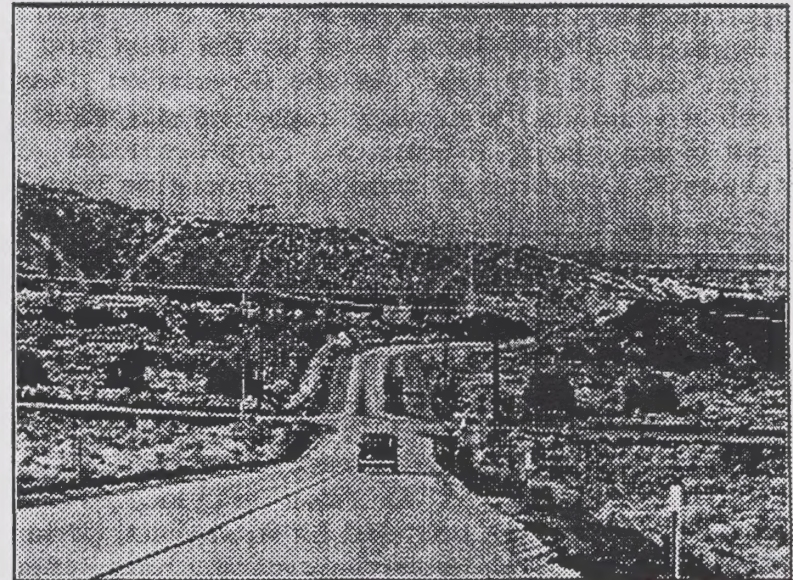


Photo 6-13: Existing Tierra Subida Avenue streetscape facing north from the CA Aqueduct.

Source: City of Palmdale Planning Department

Sierra Highway Within the planning area, Sierra Highway crosses Avenue S and extends approximately one fourth of a mile to the north and one half mile to the south. This segment of Sierra Highway currently has limited improvements consisting mostly of paved roadway. Full street improvements consisting of curb, gutter and sidewalk are located along the frontage of the existing commercial center at the southwest corner of Sierra Highway and Avenue S, with street trees planted in the parking lot landscape areas. South of this shopping center the railroad right-of-way runs along the west side of Sierra Highway. Land uses along Sierra Highway north of the intersection with Avenue S are also proposed for commercial development.

Commercial development around this key intersection will provide an opportunity to develop an enhanced streetscape theme consisting of landscaping, monument signs and decorative paving at driveway entrances. South of the intersection, views of Una Lake in this area should be considered when planning future development. Short-range views to the west are limited due to the height of the dam along the east shore of Lake Palmdale; however this area can be enhanced with street trees and a meandering walkway if authorization is granted by the railroad. Because of the unobstructed scenic views of the Sierra Pelona Mountains and surrounding foothills to the south, this portion of Sierra Highway was given a designation as a scenic highway on the City's General Plan.

6.2.3 Architectural Design Along the Avenue S Corridor



Photo 6-14: Existing strip commercial center on the SWC of Sierra Highway and Avenue S.

Source: City of Palmdale Planning Department

One component of community design within this plan refers to the architectural style and design of the existing commercial and industrial buildings within the Avenue S Corridor. As shown in the photos below the existing commercial buildings along Avenue S display various architectural styles and materials. Many of the existing commercial buildings built along Avenue S lack a common architectural theme or visual interest provided by imaginative use of materials or design. For

example, commercial buildings within the Avenue S Corridor are generally constructed primarily of one type of material or architectural detail, using stucco-covered wood framed or masonry block construction. Window treatments, consisting of large glass panels spanning the roofline to the floor are not conducive to a desert environment and provide little visual interest other than advertising space for building tenants. Building entrances are generally a continuation of the window treatment, making users search for door handles to set them apart from the rest of the building.

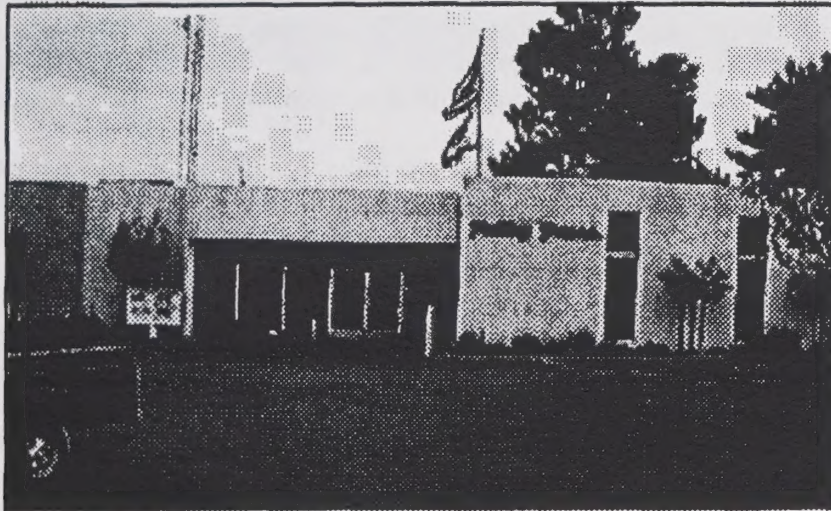


Photo 6-15: Antelope Valley Press building on Sierra Highway

Source: City of Palmdale Planning Department

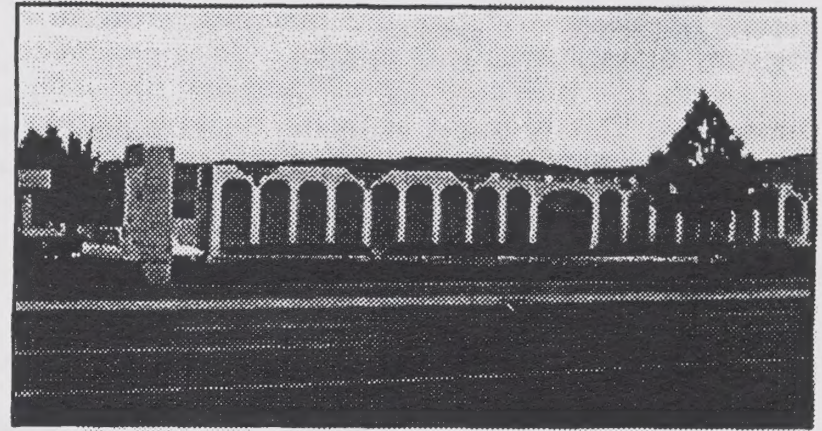


Photo 6-16: Existing medical offices in front of the former Palmdale Hospital

Source: City of Palmdale Planning Department

The Avenue S Corridor Area Plan provides an opportunity to establish a framework for future development that will create a strong sense of identity and community through the use of harmonious architectural concepts, colors and materials. Buildings should reflect the history character and environment of the City of Palmdale. Trendy architecture should be discouraged since it does not convey a timeless, lasting quality. Building placement, bulk and design can also help create a positive community design as well as preserve views of Lake Palmdale, Una Lake and surrounding hillsides.

6.3 The Community Design Plan For the Avenue S Corridor

Section 6.1 explains why community design is particularly important along the Avenue S Corridor and how design guidelines can be used to enhance a community's image. The General Plan Community Design Element contains broad goals, objectives and policies which have been designed to encourage positive community design throughout the City. This Chapter and the design guidelines contained in Appendices B and C, build on these General Plan goals to further define specific objectives that are intended to create a positive community design image reflective of the community's history and which will visually unify the Avenue S Corridor creating a "sense of place" at this important gateway to the City. Implementation measures, referred to as action items, have been developed throughout this Section to ensure that these design objectives are implemented either as private development occurs within the Avenue S Corridor or as a part of a City-sponsored capital improvement project.

Appendix B and Appendix C of the Avenue S Corridor Area Plan outline the design and landscape guidelines, respectively for new development within the Corridor. It is proposed that these guidelines be adopted with this Plan in order to facilitate development within the planning area and will function as design guidelines supplementing the Zoning Ordinance and General Plan in the Avenue S Corridor planning area.

Goal CD1. Create and maintain a well-designed built environment for the City of Palmdale, which contributes to the community's economic vitality and enhances the quality of life for its residents.

ASCAP Objective CD1. Establish design guidelines within the Avenue S Corridor that promote a single consistent community design image for non-residential architecture, streetscape elements and landscaping in order to provide a common identity to future corridor development.

Discussion: The General Plan Community Design Element establishes policies to shape the City's overall form and appearance. The process of designing the community is a continuous one, with each development decision contributing to the City's urban form and quality of life.

Architecturally many of the newer commercial buildings in the City are designed with Mediterranean features, including beige or earth-tone stucco coatings, red tile roofing and colored tile accents. The commercial corridor along Avenue S shows less uniformity of design, primarily because individual development has not been coordinated with specific design guidelines.

Adoption of an architectural design theme for commercial development along the Avenue S Corridor would require that each project integrate similar characteristics in terms of size, shape, massing,

setbacks, orientation, architecture, colors and landscaping. It is believed that this type of coordination will create consistency and long term value for the community

Actions:

Ref.	Action	Responsible Party	Time Frame
6.1.	Ensure that new development adheres to the design guidelines adopted in the Avenue S Corridor Area Plan with respect to landscaping, lighting and architectural design.	Reviewing authority	During development review

Goal ER1. Preserve significant natural and man-made open space areas that give Palmdale its distinct form and identity

ASCAP Objective CD2: Ensure that new development within the Avenue S Corridor is designed and oriented to preserve long and short-range views of scenic features such as Lake Palmdale, Una Lake, and views of the foothills and valley floor where appropriate and practicable.

Discussion: The Avenue S Corridor affords scenic views of both the Sierra Pelona and San Gabriel mountains, as well as of dramatic views of the valley floor. The City's General Plan has designated Tierra Subida Avenue and Sierra Highway south of Avenue S, as scenic roadways. Additionally although not currently designated as a scenic roadway State Route 14 provides a view of the California Aqueduct, Lake Palmdale and the valley floor (see Photo 6-8).

The height and mass of any structures along State Route 14, Tierra Subida Avenue and Sierra Highway south of Avenue S, should be designed to maintain view corridors within the planning area. As shown in Figure 6-1, the design and placement of buildings can either block or protect views. Additionally the design of structures can also help reduce visual impacts. In this regard, pitched roofs that follow the natural grade create a more pleasing appearance when viewed from higher grades and reduce the perceived mass of structures. Also, architectural treatment of all four sides of the building and screening of any roof-mounted equipment help to promote aesthetically pleasing development in areas where significant views are intended for protection.

Structures that are placed too close together adjacent to the street block views. Buildings that are set back from the street with greater separation between structures create a more open feeling and help to preserve view corridors. Similarly taller buildings block views more than single story buildings.

Because of the Freeway's higher grade elevation in relation to the area located between the Freeway and Lake Palmdale, the need for screening of utility equipment takes on added significance. Screening of equipment, loading, trash and other service areas should be considered during site design so that appropriate measures to screen equipment are taken, such as but not limited to architectural parapets with sufficient height to screen the equipment, grouping the equipment within rooftop wells, or if necessary mounting the equipment on the ground behind screen walls. An example of a commercial center utilizing a combination of roof top wells and low profile screen walls is shown in Photo 6-17. Screening is essential to preserve the view when screening is given a low priority the result can be aesthetically unpleasant.

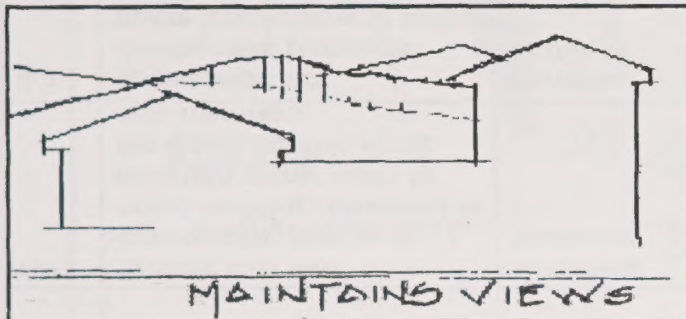


Figure 6-1. Building design can help maintain views.

Source: Ewing Architects, Inc.

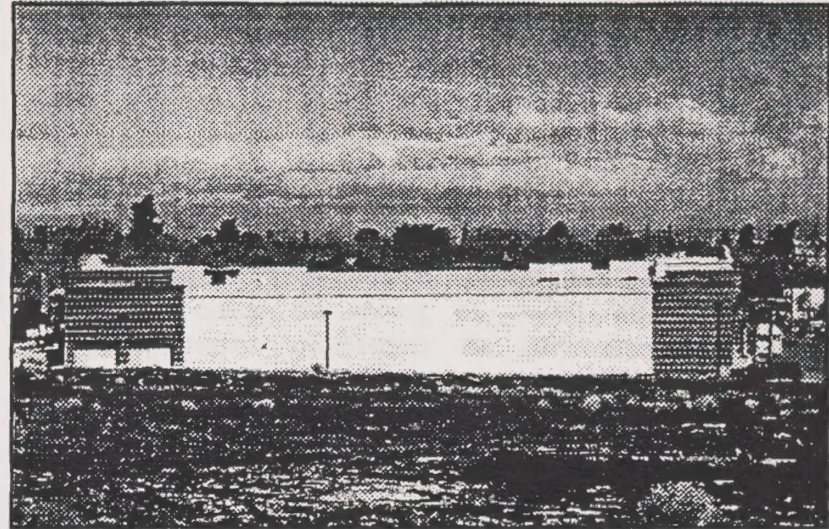


Photo 6-17. Example of well screened roof mounted equipment.

Source: City of Palmdale Planning Department

Actions:

Ref.	Action	Responsible Party	Time Frame
6.2.	As determined by the Director of Planning, developers may be required to prepare a project-specific visual analysis to fully evaluate equipment screening and building impacts on viewshed. Renderings for such studies should show landscaping at time of planting as well as maturity	Reviewing Authority	During development review

6.3.	Require that new development proposals balance building height with appropriate setbacks to preserve view corridors.	Reviewing Authority	During development review
6.4.	Require that new development proposals orient building placement to maintain scenic views to the extent feasible along area roadways.	Reviewing Authority	During development review
6.5.	Require that new development proposals utilize landscaping to soften building mass and parking areas without impeding views along scenic highways.	Reviewing Authority	During development review

Goal CD2: Enhance a “sense of place” within Palmdale by emphasizing the City’s environmental setting, natural amenities and human resources.

ASCAP Objective CD3: Construct entry gateways at the intersections of Avenue S and the Antelope Valley Freeway and at Avenue S and Sierra Highway which create a “sense of arrival” to Palmdale.

Discussion: In order to create a sense of arrival to the City of Palmdale, the General Plan call for entry monumentation to be installed on the major thoroughfares near City limits. Along Avenue S, it is recommended that entry monuments be created as part

of the streetscape design for northbound traffic at the freeway off-ramp and for northbound traffic at Sierra Highway

Design features that may be used to promote a sense of identity at these gateways include distinctive welcome and identification signs for the City enhanced landscape treatment, including both decorative paving and plant materials within medians, parkways, cloverleaf areas and landscape easements, and distinctive lighting standards. The City’s design consultant on this project, Ewing Architects, Inc., prepared a conceptual sketch of the type of enhancements that could be provided at the intersection of Avenue S and Sierra Highway as shown in Figure 6-2. Appendix C contains more detailed landscape schematics for gateway treatments.

A gateway entry identification sign was also developed for the Avenue S gateway (see Figure 6-3). The design of the sign incorporates historic architectural characteristics described in this Chapter utilizing material such as wood or wood substitutes, and incorporating architectural details such as a sandstone rock base, pronounced cornices as an edge treatment and articulation at the bottom of the sign. The face of the sign can be designed with the City’s name and logo for use at major gateway entrances to the City. Some of the design features of this sign could also be incorporated into signage for commercial development along the Avenue S Corridor

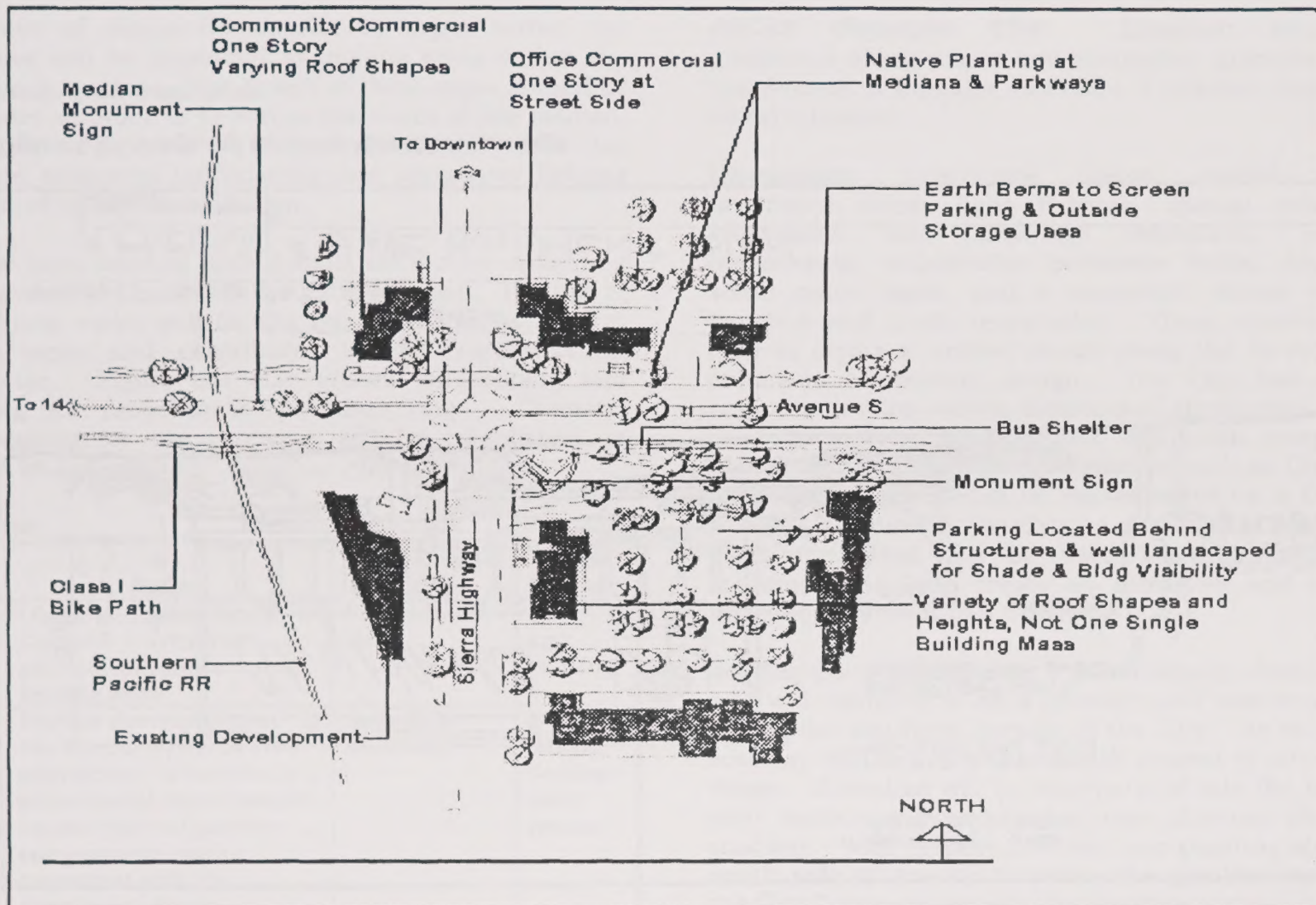


Figure 6-2: Conceptual design of the Avenue S and Sierra Highway commercial gateway

Source: Ewing Architects, Inc.

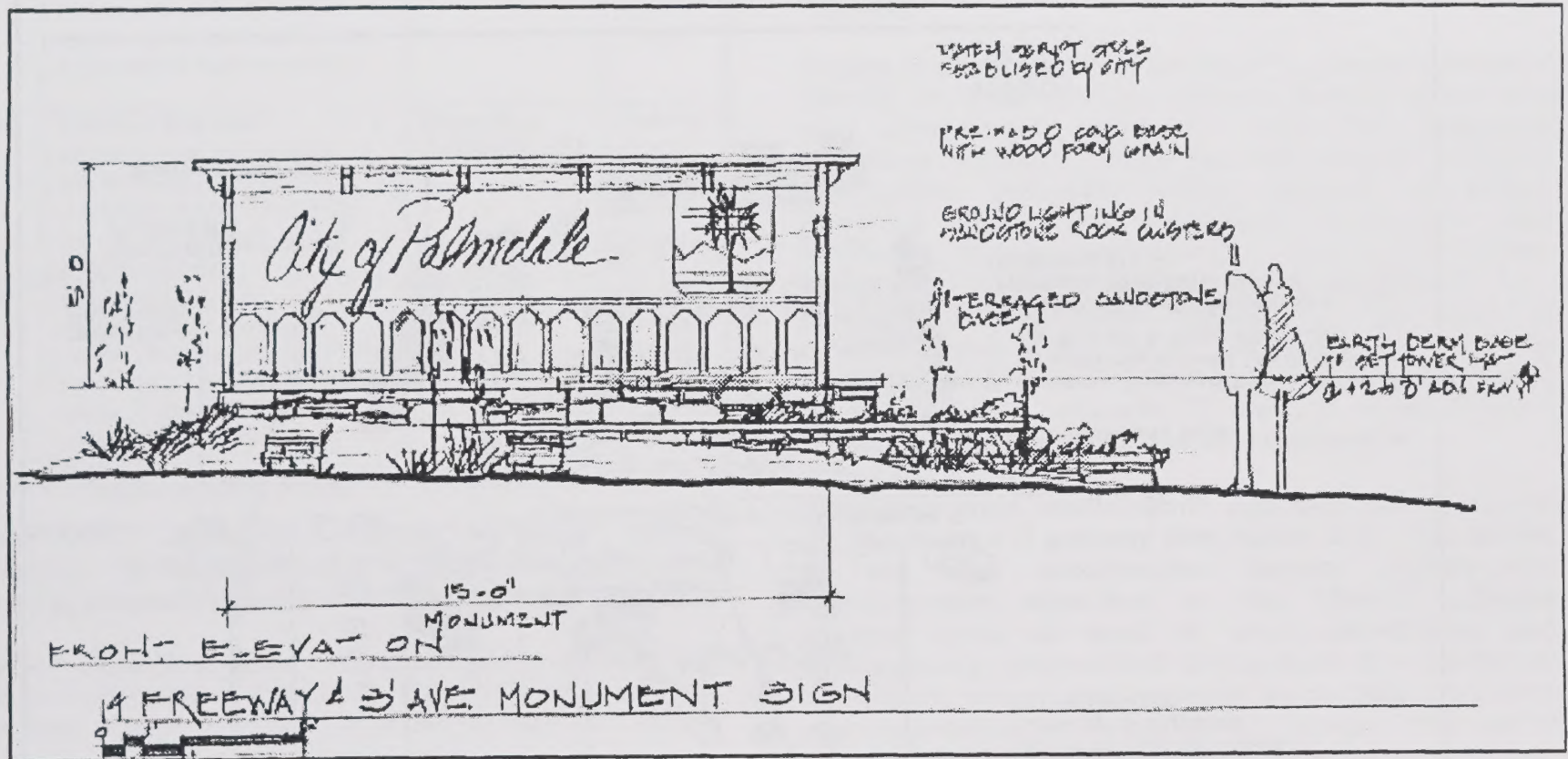


Figure 6-3: Proposed gateway identification sign.

Source: Ewing Architects, Inc.

The use of distinctive monument signs within the Corridor can be expanded to include signs within the Avenue S medians. The design of these signs should be narrower in order to fit within the width of the median, as shown in Figure B-17 of Appendix B, and would also include enhanced landscaping and decorative lighting as part of the thematic design.

Rather than internal illumination, decorative uplighting is proposed to illuminate the gateway signs. The use of uplighting works well for the type of materials used in these signs and contributes to their architectural character. Figure 6-3 also shows landscaping and lighting for presentation purposes only. Thematic landscaping for the gateways will be established as shown in Appendix C.

Actions:

Ref.	Action	Responsible Party	Time Frame
6.6.	Obtain authorization from Caltrans to construct gateway entrances within freeway ROW	Public Works Dept.	1998 and ongoing
6.7	Require development at the Avenue S/Sierra Hwy intersection to contribute a proportional share towards construction of gateway entry improvements consistent with the streetscape design guidelines contained in Appendix C.	Reviewing Authority	Ongoing during development review

ASCAP Objective CD4 Establish streetscape guidelines along major and secondary arterials within the Avenue S Corridor to create a positive community design element.

Discussion: Streetscape design should include decorative street light fixtures, special paving at crosswalks and driveway entrances, parkway landscaping, subdivision perimeter walls, decorative street name signs, and a consistent design for bus benches and trash receptacles. These elements can help to create a unified image along the street which enhances community design. The City has already begun to develop certain elements of streetscape design, such as uniform bus benches and trash receptacles. These, as well as additional elements such as City entry monument signs, could be implemented on a Citywide basis. Additional streetscape guidelines should be established that can be used by the development community to help create an attractive and uniform image for the Avenue S Corridor.

As discussed in Chapter 4 (Circulation), Avenue S is and will continue to be a heavily used east-west route within the southern portion of the City. As such, this roadway will be a focal point with respect to streetscape design. A median will be incorporated into the roadway with landscaping and formal tree planting along the roadway. With respect to street tree planting along the south side of Avenue S within the gas line easement, the Gas Company permits the planting of trees to within 10 feet of the gas lines. To protect the gas lines, trees that do not have intrusive root systems have been

included in the landscape palette. Where appropriate, root barriers will be used for street tress.

Street furniture will consist of bus benches and matching waste receptacles. In 1996 the City initiated a City-wide program for the installation of bus benches and trash receptacles. The color of the benches and waste receptacles is hunter green, a traditional color for outdoor furniture. The furniture is of powder-coated tubular steel, designed so as to reduce rusting and graffiti. During the first year of the program, 58 benches were installed, with installation of another 50 benches completed in 1997. The Corridor area is served by public transit routes along Avenue S east of Sierra Highway. West of Sierra Highway is currently unserved. To date, one bench at the northwest corner of Sheffield Drive and Avenue S has installed within the Corridor. However, since the installation of the benches is limited to locations with improved curb and sidewalks, it is anticipated that six additional benches can be installed at the remaining locations, shown in Table 6-1 as the roadway is improved during future phases of the program. It is also anticipated that as Avenue S is improved and vehicle trips increase, the Antelope Valley Transit Agency (AVTA) will either add or expand existing routes to incorporate more of the Study Area, especially near the park and ride facilities. As this occurs, future phases of the Transportation Amenities Program will provide transit additional bus benches along these routes.

The streetscape can also be enhanced by limiting the number of off-premise advertising signs permitted

Table 6-1
Existing public transit stop locations.

No.	Location
1	Southeast corner of Avenue S and 10 th Street East.
2	Northeast corner of Avenue S and 10 th Street East.
3	Southwest corner of Avenue S and Swan Drive.
4	South side of Avenue S, adjacent to Mountain Shadows.
5	Northeast corner of Avenue S and Downing Street
6	Southeast corner of Avenue S and Casa Verde

Source: Antelope Valley Transportation Agency. Date:1/6/98

within the study area to those presently existing. Currently there are six billboards located within the planning area between 20th Street East and just west of Sierra Highway. The City's Zoning Ordinance restricts the establishment of new billboards along certain portions of State Route 14. This restriction can be extended to include the Avenue S Corridor planning area through means of a Zoning Ordinance Amendment. Through this action, the existing billboards would be permitted to remain as legal non-conforming signs, subject to eventual abatement as permitted by state law.

The number of street lights in low density residential areas should be kept to a minimum in order to reduce visual impacts of nighttime glow and preserve a rural character. In addition, areas that are visible from higher elevations should minimize the amount of light and glare from street lights and site lighting. Currently the Los Angeles County Street Light Division allows shields to be placed at the back of the lamps to help focus illumination to the intended area, minimizing light

and glare impacts from distant viewing locations. The City's Zoning Ordinance also regulates the amount and intensity of site lighting for commercial development in order to minimize off-site impacts as well as to promote public safety

Subdivision walls, when constructed along Avenue S and other arterial streets within the planning area, should consist of decorative, durable materials that are consistent with surrounding development. At the present time, perimeter walls extend along the frontage of Avenue S for a total of three quarters of a mile. Most of the frontage where the walls are located has landscaping which help to break up the visual expanse of walls. In accordance with the City's General Plan Community Design Element, subdivision designs utilizing side on cul-de-sacs or open view fencing are encouraged to break up the appearance of long monotonous walls along streets. Other methods to enhance perimeter walls include varying the wall setback, installing planter wells within the wall and utilizing landscape materials such as vines. Appendix B contains guidelines for subdivision walls, to be used where walls are incorporated into the streetscape design.

A Class I bike way is proposed to be incorporated on the south side of Avenue S within the gas line easement and will be included in the design of the streetscape. This bikeway is shown in the conceptual cross-section for Avenue S shown in Figure B-17 of Appendix B.

Actions:

Ref.	Action	Responsible Party	Time Frame
6.8.	Construct streetscape design features along major and secondary arterials within the Avenue S Corridor Planning Area as detailed in Appendix B. Streetscape design to include a combination of street medians, on-site hardscape and landscape, street and site lighting, bikepaths, trails, public benches, bus stop benches and shelters, and trash receptacles.	Reviewing authority for private development and Public Works Dept. for City initiated improvements.	1998 and ongoing
6.9	Require that construction of perimeter walls comply with the guidelines contained in Appendix B.	Reviewing authority	Ongoing
6.10.	Where feasible and when funds are available, seek to establish a Landscape Maintenance Assessment District and/or retrofit parkways along arterials abutting existing residential development, pursuant to the streetscape guidelines contained in Appendix C.	Public Works Department	Ongoing

6.11.	Require use of shields at the back of lamps on street and site lighting when appropriate to minimize off-site glare.	Reviewing authority	Ongoing, as development occurs.
6.12.	Amend the Zoning Ordinance to prohibit additional off-premise outdoor advertising sign structures on properties within 660 feet of Ave. S.	Planning Department and City Council.	1998
6.13.	Require all existing billboards within the Corridor to be subject to the amortization schedule located within the Zoning Ordinance.	Planning Director	1998 and ongoing

Goal CD8: Use landscaping to reinforce community identity and to create a pleasant environment.

ASCAP Objective CD5: Establish a landscape palette consisting of street trees and median improvements that can be utilized by private landowners as development occurs or as a part of a larger scale public works project, and which will unify and enhance the visual character of the Avenue S Corridor

Discussion. A unifying landscape theme is a relatively simple method of providing design continuity along the Avenue S Corridor. Establishment of a landscape theme is achieved by selecting a specific range of plant and tree varieties to be used within the Corridor known

as a landscape palette. Within the Corridor designated street trees will be planted along Avenue S, Sierra Highway and Tierra Subida Avenue. The selected street trees should provide a broad canopy for shading during the summer and solar warming in the winter. Recommended street trees for these roadways are listed in Appendix C.

In addition to these canopy trees used to enhance the streetscape, accent trees with lower profiles will be used to fill in the landscaping, and provide color and contrast. Additionally planters within the Avenue S median can be filled in with colorful flowers, shrubs and greenery.

Sierra Highway and Tierra Subida Avenue are the major north-south roadways within the study area. Both are designated as scenic highways in the Palmdale General Plan due to the long-range scenic vistas seen from these roadways; therefore, the landscape palette along these roadways must consider retention of the viewshed. Thematic landscape concepts for street medians and parkways for Avenue S, Sierra Highway and Tierra Subida Avenue have been prepared by the City Landscape Architect and are detailed in Appendix C. The following paragraphs summarize these concepts.

Avenue S. The landscape treatment along Avenue S will reflect the diversity of land uses within the Corridor from the rural character on the west side to the more urban development on the east side. The landscape concept along Avenue S in rural areas will include street trees placed informally to provide opportunities

for views and will use predominantly broad-canopy shade trees with intermittent evergreen trees. Additional shrub plantings will be informally massed and will utilize plant material that is indigenous to the surrounding area or complementary to the rural setting, where feasible based on right-of-way width. Additional plantings of smaller scale trees and shrubs will be incorporated into the bike path section. Idaho locust is proposed as the predominant street tree along this segment of Avenue S. The Idaho locust is a deciduous tree of moderately fast growth to a height of forty feet. It is an excellent flowering tree, providing bright magenta or rose flowers in the spring. The street trees along Avenue S will be occasionally interrupted with plantings of Mondell pines.

Along the segment of Avenue S east of Sierra Highway the landscape setting will develop into a more formal pattern and spacing. In some locations, formal plantings of *Platanus acerifolia*, London plane trees, have already been planted and have begun to establish the streetscape. This tree is proposed to continue to flank both sides of Avenue S and create a formal streetscape that denotes the intensity of development that is existing and planned for the area. London plane trees grow quickly and can range from forty to eighty feet in height with a canopy of 30 to 40 feet wide. A deciduous tree with deep lobed, maple-like leaves, the London plane is commonly used in regularly spaced rows and blocks for formal plantings

Sierra Highway Sierra Highway is an important north-south access into the City of Palmdale. From Avenue S to Avenue R, the streetscape will consist of a formal planting of Modesto ash. These trees will establish a link between the rural character of Sierra Highway south of Avenue S and will connect to the planting of Modesto ash to the north of Avenue R. The Modesto ash is a deciduous tree that grows to about fifty feet with a thirty foot spread and has medium green glossy leaflets, with a bright yellow fall color. The Modesto ash is commonly used as a street tree.

Tierra Subida Avenue. The landscape concept along Tierra Subida Avenue will also reflect the rural setting of this area. Street trees will be placed informally in order to preserve the viewshed along this roadway and will consist of broad canopy shade trees with intermittent evergreen trees. Supportive shrub massings will be informally massed and will utilize plant material that is indigenous to the surrounding area or complementary to the rural setting, provided that sufficient right-of-way is available. The Modesto ash tree is proposed as the street tree along Tierra Subida Avenue.

Actions:

Ref.	Action	Responsible Party	Time Frame
6.14	Obtain authorization from UPRR and MTA to construct landscaping within the railroad right-of-way along the west side of Sierra Highway south of Avenue S.	Planning and Public Works Depts.	1998 and ongoing

6.15.	Construct or require the construction of landscaping within street medians and along parkways on Avenue S, Sierra Highway and Tierra Subida Avenue within the Corridor in compliance with Appendix C.	Reviewing authority and Public Works Department.	As development occurs or in accordance with the CIP
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Goal ER7. Protect historical and culturally significant resources which contribute to the community's sense of history

ASCAP Objective CD6. Establish an architectural design theme for commercial development within the Avenue S Corridor that is reflective of the early settlement of Palmenthal, as a means of establishing a sense of the City's history

Discussion: Historic preservation can be accomplished through a variety of methods. Some of the more common methods include preservation of historically significant structures or by designating certain areas as historic districts. The City's General Plan Environmental Resources Element contains a list of structures that have potentially historic significance; however this list is not exhaustive. Within the study area, the Palmdale Cemetery is listed as a historic structure.

The Community Design Element of the General Plan promotes use of community design to reflect the City's origin through historic architectural themes and elements. The early building architecture of Palmenthal provides the basis for developing common architectural design elements within the Avenue S Corridor. The City's design consultant on this project, Ewing Architects, has developed a set of design elements that can be integrated into new development to create this desired image. Through adoption of the Avenue S Corridor Area Plan by the City Council, the guidelines will become an integral part of the development review process for all development proposed within the Avenue S Corridor. In this regard, the following architectural elements have been developed which are described in more detail in Appendix B.

"We shape our buildings; thereafter they shape us".

Sir Winston Churchill

Source: The Columbia Dictionary of Quotations

Building Massing. Breaking up the building mass can affect the perception of a building by combining simple forms to create visual interest and heighten the sense of historic character. The placement of a building on its site can also influence its perceived mass.

Building Facades. The face of buildings, particularly those that face the street, should be staggered within themselves and between neighboring structures to create an articulated elevation that plays with light, shadow and shade. Historic elements such as wide porch recesses, covered balconies, and pitched roofs, should be used to achieve this effect.

Continuity As Photo 6-2 of the old Palmdale Schoolhouse shows, all four sides of the building were architecturally treated. Some elements of the front facade treatment and architectural style should be continued on all visible sides or portions of a building. Colors, materials and some architectural details can be used to provide for continuity

Building Height. Variation in building height can break up the perceived overall building mass. A variation in roof style may also be used to differentiate between two buildings of similar height.

Architectural Projections. Covered entry porches with roof overhangs or extended second floors, reflective of the historic Palmenthal architecture, should be incorporated into project design. The second floor level could be enclosed space or an open balcony over the porch area.

Architectural Openings. Openings such as windows, doors, entryways and arches should be similar and coordinated within a structure or facade. The use of multi-paned windows and doors is encouraged over the

use of large panes of glass, which can appear as uninviting as a solid wall.

Doors. Doors should be solid wood or hollow metal with multiple pane glazing in keeping with the historical context of Palmdale. All glass doors or those with a minimal amount of frame are discouraged.

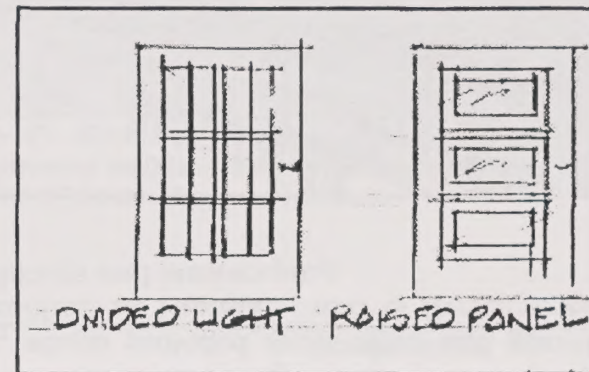


Figure 6-4: Acceptable door designs.

Source: Ewing Architects, Inc.

Architectural Character The architectural character of the building should convey a timeless quality that avoids directly copying or recreating a particular era. Architectural forms such as gabled and pitched roofs, eaves, covered porches, and building materials which are part of Palmdale's history are encouraged.

Alcoves. Alcoves for entries are recommended to be set back from the main building facade approximately 8 to 10 feet, in keeping with the historic architectural styles.

Architectural Detailing. The architectural detailing of the facade should be achieved by the use of cornices, wainscots, overhangs, porches, window sills, etc. as typified by the building shown in Photo 6-18 and detailed in Figure 6-5. Historical elements such as cupolas atop roof ridges, exposed metal gutters and downpouts (copper or painted, not bare galvanized metal), towers, ridge ornamentations, short roof eaves, lattice work screens, etc., should be used in harmony with one another to achieve a cohesive, quality design.

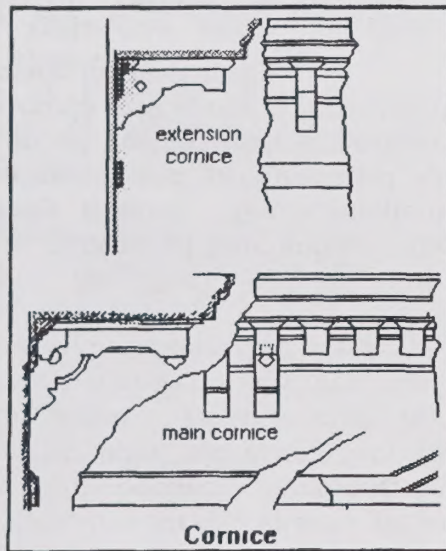


Figure 6-5: Example of cornice detailing.

Source: The American Heritage Dictionary.

"The essential thing in a building . . . is that it be strongly built, and fit for its uses."

John Ruskin

Source: The American Heritage Dictionary of the English Language

Architectural Materials. Building materials should be selected for their architectural harmony aesthetic quality durability and ease of maintenance. River rock has a historical context given the proximity of Littlerock Creek, which provided rock, sand and gravel for early construction in Palmdale, and is therefore encouraged in buildings and landscaping.



Photo 6-18: Example of lap siding, oversized eaves, and multi-paned windows with sashes.

Source: City of Palmdale Planning Department

Building Colors. The color palette should be in the desert hues, ranging from off-white to rust, mauve to pastel purple and warm gray

Lighting. Lighting fixtures which evoke a sense of history such as reproduction of gas or electric cast iron or those used within the City's downtown district and shown in Figure B-16 of Appendix B are recommended for use within the historic passive park around Palmdale Cemetery and as city street lights. Also desirable are fixtures which were originally associated with the Southern Pacific Railroad. These recommendations also apply to site lighting and public lighting, such as along pedestrian walkways. Forest green and copper colors are preferred.

Signage. All project signage will be subject to the standards contained in the Palmdale Zoning Ordinance. Ground mounted monument signs should complement the building by incorporating the colors and materials used for the primary building. External up-lighting of ground mounted signs is encouraged to provide an aesthetic appeal to the sign.

Historical Signs. Chapter 2 includes action items to acquire the easterly and southerly property surrounding the Palmdale Cemetery in order to develop a historical passive park. The park is anticipated to include complementary signs describing the historical significance of early Palmenthal settlement.

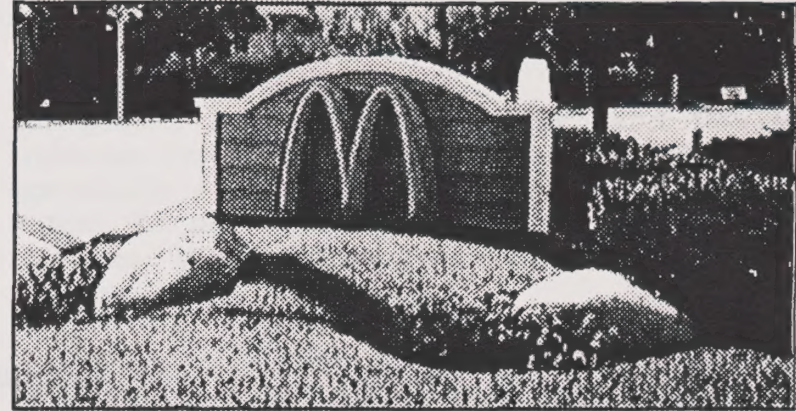


Photo 6-19: Monument sign incorporating lap siding to match primary building shown in Photo 6-18.

Source: City of Palmdale Planning Department

Actions:

Ref.	Action	Responsible Party	Time Frame
6.15.	Require the incorporation of architectural design and materials reflective of the early settlement of the City in new commercial developments, as described in Appendix B.	Reviewing authority	Ongoing, as development occurs

Chapter 6—Community Design
Avenue S Corridor Area Plan

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Appendix A General Plan Policies for the Avenue S Corridor

The following General Plan policies are applicable to the study area and therefore greatly influence the proposed land uses within the Avenue S Corridor Area Plan as well as future development in this area.

Land Use Element:

Policy L1.3.1. On the Land Use Map, designate land uses in consideration of topography environmental constraints, availability of infrastructure, and intensity of adjacent uses.

Policy L1.4.2: Establish the following standards in and adjacent to Alquist-Priolo Earthquake Fault zones and active fault zones, in order to protect residents, property and infrastructure systems from damage by seismic activity. *(General Plan Amendment 96-4 adopted by City Council April 9 1997)*

- a. Restrict development of habitable structures in these zones in accordance with requirements of State law
- b. Establish a maximum permitted density within all land between the outer boundaries of the Alquist-Priolo Earthquake Fault Zone of three (3) dwelling units per acre (gross) within residentially-designated land within

Policy is proposed for modification or deletion upon approval of the Avenue S Corridor Area Plan

the project site, except where the Land Use Map indicates lower densities in these areas. This policy specifically excludes any non-residential land uses within the project site from the calculation of gross densities. *(General Plan Amendment 96-4 adopted by City Council April 9, 1997.)*

- c. Require placement of roads, utilities and other infrastructure to be located outside of active fault zones, where feasible.

Policy L1.4.3: Establish the following standards for development in hillside areas:

- a. Development in hillside areas should minimize grading, conform to natural topography preserve ridgelines and exhibit sensitivity to natural landforms.
- b. Development should be restricted on natural slopes of fifty percent and greater
- c. Visually prominent ridges and hillsides should be retained in a natural condition.
- d. Flexibility in land use regulations may be permitted when it can be demonstrated that such flexibility will meet hillside management objectives.

Policy L3.1.1. On the Land Use Map, establish residential land use designations for a range of residential densities as follows:

a. **Equestrian Residential:** The Equestrian Residential (ER) designation is intended for single family residential uses at a maximum gross density of 40 du/ac (1 unit per 2½ acres), yielding an estimated population of 800 persons per square mile. Equestrian and related animal keeping activities are permitted within this designation. The character of areas within this designation will be rural in nature with parcel sizes of 2½ acres or larger. Clustering to preserve significant natural landforms is feasible, although where this designation is located in established rural neighborhoods on level terrain, clustering may not be acceptable. Full urban services such as community water and sewer may not be available to these areas, and public improvements may be constructed to rural standards where permitted. Densities within this designation may decrease pursuant to slope density ratios established in the Hillside Management Ordinance. Actual permitted density will be determined through the development review process, based on applicable environmental and infrastructural conditions.

b. **Low Density Residential:** The Low Density Residential (LDR) designation is intended for single family residential uses at a maximum gross density of 1 dwelling unit per acre with an estimated population of 1,600 persons per square mile. The Low Density designation is appropriate to hillside areas and as a transition between rural and suburban areas. It is

generally expected that urban services such as community sewer and water will be provided to new development proposed within this designation, although rural street and lighting standards may be appropriate to some projects. Minimum lot size within this designation will generally be one (1) acre or larger although clustering may be permitted to encourage preservation of natural resources and steep slopes. Densities within this designation may decrease pursuant to the slope density ratios established in the Hillside Management Ordinance. Actual permitted density will be based on applicable environmental and infrastructural conditions.

c. **Single Family Residential-1 (0-2 du/ac):** The Single Family Residential-1 (SFR 1) designation is intended for single family residential uses with gross densities ranging from 0-2 du/ac and an estimated population of 3,600 persons per square mile. Net lot sizes will generally be one half acre or larger creating a semi-rural environment with horse/animal keeping possible. This designation may be utilized in lower hillside areas where inclines are present but topography is lacking significant slope constraints. It may also be utilized in outlying valley areas where large lot subdivisions are desired. Full urban services are expected in these areas, although larger lot subdivisions may develop with rural street and lighting standards as determined by the City. Clustering may be permitted to preserve steep hillsides and significant physical features. Densities within this designation may decrease pursuant to slope density ratios establishing in the Hillside Management Ordinance. Actual

permitted density will be based on site specific environmental and infrastructural conditions.

d. Single Family Residential-2 (0-3 du/ac): The Single Family Residential-2 (SFR 2) designation is intended for single family residential uses with gross densities ranging from 0-2 du/ac and an estimated population of 5,600 persons per square mile. Net lot sizes will generally be 10,000 square feet or larger although clustering may be permitted to preserve steeper terrain or significant physical features. This designation is appropriate in those areas between the valley floor and steeper hillside areas (generally having less than ten percent slope). Full urban services will be required in new development areas. Densities within this designation may decrease pursuant to slope density ratios established in the Hillside Management Ordinance. Actual permitted density will be based on site specific environmental and infrastructural conditions.

e. Single Family Residential-3 (3.1 6 du/ac): The Single Family Residential-3 (SFR 3) designation is intended for single family residential uses with gross densities ranging from 3.1-6 du/ac and an estimated population of 9700 persons per square mile. Subdivisions containing the City's standard 7,000 square foot minimum lot size will typically be located within this designation. Densities under this designation may decrease pursuant to the slope density ratios established in the Hillside Management Ordinance. Actual permitted density will be based on site specific environmental and physical constraints.

f. Medium Residential: The Medium Residential (MR 6.1 to 10 0 du/ac) designation is intended for residential uses at maximum gross densities ranging from 6.1 to 10 units per acre and an estimated population of 16,200 persons per square mile. Housing types may include single family detached, single family attached, townhouses, condominiums, duplexes, triplexes, apartments, or manufactured housing developments. Permitted structure types will be as specified in the underlying zone district. For single family residential uses within this designation, the minimum permitted lot size is 7,000 square feet, unless otherwise specified in an approved specific plan or residential planned development offering a variety of lot sizes, housing types, and public amenities, a senior housing project, or other approved development plan.

The Medium Residential designation is appropriate within those areas having existing or planned residential uses at 6.1 to 10 units per acre, which are or will be served by adequate infrastructure and services needed to support this level of development. Maximum permitted density will be determined through the development review process, based upon environmental and infrastructural conditions. Equestrian and large animal uses are not intended within this district.

g. Multi-family Residential: The Multi-family Residential (MFR 10 1 16) designation is intended for residential uses with densities ranging from 10 1 16 du/ac and an estimated population of 26,000 persons per square mile. Housing types may include a variety of attached and detached dwelling unit types, as permitted

by the underlying zone. Actual density permitted will be based on site specific environmental and infrastructural conditions. *(General Plan Amendment 94-4 adopted by City Council December 14 1994)*

Policy L3.1.2: In calculating the actual permitted density on a parcel of land, the following constraints will be considered: *(General Plan Amendment 96-4 adopted by City Council April 9, 1997.)*

a. No residential density shall be calculated for any seismic set back zone adjacent to active or potentially active fault traces where construction of habitable structures is not permitted, as delineated by a site-specific geotechnical report. However seismic set back zones may be included in the calculation of minimum lot area and building setbacks. Areas located within the Alquist-Priolo Earthquake Zone, as delineated by the State Geologist, are subject to the density limitations described in Policy L1.4.2.

b. A maximum residential density of .5 (one/half) dwelling unit per acre shall be calculated for flood hazard areas shown on the latest Flood Insurance Rate Maps as Zone A, and within the historic high water mark of Amargosa Creek, Ana Verde Creek, Littlerock Wash, Big Rock Creek, Hunt Canyon or any natural blue-line creek, except where the Land Use Map indicates lower densities in these areas.

c. In hillside areas, density calculation will also be subject to the provisions of the City's Hillside Management Ordinance.

Policy L3.2.1. Permit a range of residential densities and housing types throughout the City rather than concentrating higher densities in limited areas.

Policy L3.3.4 The City recognizes the need to preserve existing mobilehome housing opportunities within the City of Palmdale and Planning Area. Table LU-5 lists the mobilehome parks in the City of Palmdale and Planning Area as of January 1993. In order to provide stability and a high quality living environment for residents of these mobilehome parks, the following standards for maintenance and criteria for conversion of the parks to other uses shall apply:

A. Standards for Maintenance:

1 Common areas, including common landscaping, parking areas, drive aisles, and pedestrian access, shall be maintained in a neat and orderly fashion, free from conditions which may jeopardize residents' health, safety and welfare. Unsafe conditions shall be promptly repaired.

2. Park amenities, such as recreation buildings, outdoor recreation features, and laundry facilities, shall be maintained in a functional manner as prescribed in the approved plan for the park.

B. Conversion Standards and Procedures:

1 The proposed conversion shall be in compliance with the provisions of California Government Code Sections 65863.7 through 65863.9

2. Residents shall be provided with the right of first refusal to purchase the park and all improvements if the land occupied by the park is to be sold.

3. The proponent of the proposed conversion shall provide all owners of individual mobilehomes within the park with a reasonably complete and current list of vacant and available mobilehome park spaces within a 20-mile radius.

4. The proponent of the proposed conversion shall pay each mobilehome owner a relocation fee (as specified in a conversion ordinance) to assist the recipient in meeting costs of relocation, higher rents for replacement mobilehome park spaces and/or the added cost of a replacement mobilehome.

C. Evaluation of Current/Future Land Use Designation and Zoning:

1. When reviewing a proposed mobile home park conversion, the City should evaluate the existing and proposed zoning and land use designations of the site of the proposed conversion to ensure that future use of the site is compatible with the surrounding area. The City Council may initiate a General Plan Amendment and Zone Change on the site if deemed necessary to ensure that future use of the property meets General Plan goals, objectives and policies.

Policy L3.4.3: Avoid designating land for higher density uses where prevailing existing development

patterns are rural residential with lot sizes of one (1) acre or more.

Policy L4.1.1. On the Land Use Map, establish land use designations to meet the City's long-term commercial needs, as follows:

a. **Office Commercial:** The Office Commercial (OC) designation is designed to accommodate a variety of professional office uses, including medical, personal, business, legal, insurance, real estate, financial, and other similar uses. Limited retail, service, child care and eating establishments may be permitted to support the primary office users within this designation, provided that they function as a supportive use and do not detract from the stated intent of this designation. Vocational, technical and trade schools, private or public college or universities, and supportive commercial uses may be consistent with this designation, provided that land use compatibility and infrastructure are adequately addressed through the design review process. This designation is appropriate between more intensive commercial uses and residential designations, or within commercial areas serving the administrative and professional service needs of businesses and the general public. The maximum floor area ratio within this designation is 1.0. Mixed use residential/office development should be encouraged within the Office Commercial designated portion of the Downtown Revitalization area through the development of appropriate mixed use development standards. (*General Plan Amendment 96-1 adopted by City Council March 20, 1996.*)

b. **Neighborhood Commercial:** The Neighborhood Commercial (NC) designation provides for convenience type retail and service activities designed to serve the daily needs of the immediate neighborhood. Goods and services provided serve the short-term needs of local residents. Typical neighborhood commercial development is located on sites of 15 acres or less with a maximum floor area ratio of .50. Site and building designs for neighborhood commercial development should be sensitive to adjacent residential uses. Buffering should be both effective and aesthetic with site design emphasizing both automobile and pedestrian needs.

c. **Community Commercial:** The Community Commercial (CC) designation is intended for businesses providing retail and service uses which primarily serve the local market. Representative uses include restaurants, apparel stores, hardware stores, grocery markets, banks, offices, and similar uses. Goods and services intended to meet both short and long term shopping needs of City residents should be targeted for these areas. A typical community commercial development contains 5 to 20 acres with a maximum floor area ratio of 1.0. Community commercial uses should have access from arterial streets, and should incorporate design measures to minimize adverse impacts to the capacity of adjacent arterial streets and to adjacent less intensive land uses.

d. **Regional Commercial:** The Regional Commercial (RC) designation is designed to accommodate retail and service uses attracting consumers from a regional

market area. Goods and services provided are typically long-term in nature, rather than convenience goods. Representative uses include department stores, regional shopping malls, automobile dealerships, hotel/motels, and large retail outlets. Supportive commercial uses serving a community commercial function, such as financial institutions, retail and food services, may also be appropriate in this designation, provided that such uses are not primarily oriented to the convenience market. Regional commercial uses should be accessible via major arterial streets or freeways. Total development area within regional commercial designations typically ranges from 40 to 100 acres or more, although individual developments within the designation may be on smaller parcels. Maximum floor area ratio is 1.0. Site design of regional centers should consider pedestrian needs and internal circulation that minimizes impacts on adjacent arterials.

e. **Downtown Commercial:** The Downtown Commercial (DC) designation is intended for the City's traditional retail/service core area, located in proximity to Palmdale Boulevard. Property within this land use category is intended to be subject to the policies and design guidelines contained in the Downtown Revitalization Plan. Representative uses are designed to produce high levels of social or commercial activity in the downtown area and include entertainment uses, institutional uses, pedestrian oriented retail and service uses, and support community commercial uses. Mixed use residential/commercial development should be encouraged within the Downtown Commercial (DC) designated portion of the Downtown Revitalization area.

through the development of appropriate mixed use development standards. (*General Plan Amendment 96-1 adopted by City Council March 20, 1996.*)

Policy L4.2.1. Encourage development of commercial uses in nodes accessible from major streets and intersections, rather than in long, continuous strips.

Policy L4.2.2: Ensure that commercial uses are spaced at appropriate intervals throughout the City in order to adequately serve users while minimizing land use interface conflicts and preserving the capacity of arterial streets, through the following measures:

- a. Avoid the creation of strip commercial development along arterial roadways. Cluster commercial development in nodes to the extent feasible.
- b. Require that nodes of commercial development intended to serve primarily a neighborhood service function be spaced at no closer than one-half mile from other commercial designations.
- c. Preserve a minimum spacing of one mile between commercial areas serving primarily community or regional service functions, to the extent feasible.

Policy L4.2.8: Establish site specific siting criteria for commercial land uses as set forth below:

- a. Commercial development should be located in areas free from major topographic variation.

- b. Commercial uses should be located and designed in such a way as to minimize interface conflicts with existing and planned residential neighborhood.

- c. Commercial sites should have a high level of visibility from public streets.

Policy L4.2.9. Avoid designating land for commercial uses simply because residential uses appear inappropriate. Consider other alternatives, including but not limited to the following:

- a. Creating an environment suitable for residential uses by employing design techniques to minimize noise/traffic impacts such as sound walls, landscaped setbacks, frontage roads, use of drainage basins, linear parks, greenbelts and trail systems to buffer dwelling units from major transportation corridors.
- b. Considering alternative uses such as industrial, open space, public facilities, or commercial office.

Policy L5.2.6: Designate industrial uses only within areas of the City without significant topographic constraints, and preclude industrial uses in hillside areas.

Policy L6.1.1. On the Land Use Map, designate land for public uses to meet community needs for schools, parks, community facilities, open space, utilities, and infrastructure. The following land use designations have been established on the land use map to meet these needs.

a. **Open Space:** The Open Space (OS) designation is intended to identify and reserve land for both natural and active open space uses, including City parks. The designation identifies existing and acquired but not yet built park sites within the community as well as lands dedicated to the City for open space purposes. The designation is appropriate to protect sites with physical limitations such as flood plains, very steep terrain (slopes steeper than 50 percent), or significant natural resources. Typical uses permitted within the open space designation include recreational uses, horticulture, agriculture, animal grazing or similar uses.

b. **Public Facilities:** The Public Facilities (PF) designation identifies land which is or will be utilized for various types of public facilities, including but not limited to schools, parks, libraries, hospitals, public safety and governmental facilities, sewer and water treatment plants, and landfills. Existing or acquired public facility sites are designated PF on the land use map; however public facilities may be allowed in other land use designations as established by the underlying zoning. Within the PF designation, uses are specifically identified by use type on the land use map. The maximum floor area designation within this designation is 1.0 (*General Plan Amendment 94-3, adopted by City Council August 11 1994*)

c. **Other Land Use Designations:** Public and quasi-public uses may also be located within other land use designations as established by the underlying zoning, provided that such locations are consistent with applicable General Plan policies and meet a general

community need. (*General Plan Amendment 94-3, adopted by City Council August 11 1994.*)

Policy L6.2.2: Provide a 1,000 foot buffer between property designated as PF-Landfill on the General Plan Land Use Map and future residential developments. (*General Plan Amendment 93-2, adopted by City Council October 13, 1993.*)

Policy L7.1.1. Ensure that development within the area between Lake Palmdale and the Antelope Valley Freeway is complimentary to the lake viewshed and consistent with sound water quality management practices by following the development criteria listed below

a. Limit building heights to a maximum of 20 feet as measured from the highest adjacent grade.

b. Require a minimum 100 foot setback from the historical high water mark of Lake Palmdale.

c. Require that proposed buildings incorporate design elements including the limitation of building widths, to minimize viewshed impacts.

d. Design storm and other drainage structures to convey storm and nuisance water away from Lake

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Palmdale. No conveyance will be allowed into Lake Palmdale.

e. The area shall be served by a sanitary sewer system. No septic systems will be allowed.

f. Underground storage of petroleum or similar products which pose a threat to lake contamination shall be prohibited.

g. Rear and side elevations should contain similar elements of the front elevation, ensuring that buildings within the area maintain an cohesive, unified appearance on all sides.

h. Loading and refuse containment areas must be screened from public view utilizing architectural elements consistent with overall building design.

i. Completely screen all mechanical and rooftop equipment from view from S.R. 14 and Avenue S. Roof top equipment screening shall be accomplished through architectural means compatible with the building design.

j. Require view studies to fully evaluate adequacy of equipment screening and building impacts on viewshed. Renderings for such studies should show landscaping at introduction as well as a maturity

k. Utilize landscaping to soften building mass and parking areas without impending views.

l. Utilize earth tone colors for building and roof materials to blend with natural setting to the maximum extent feasible.

m. Prohibit use of sound walls as a method for acoustical mitigation of building interiors. Noise mitigation shall be accomplished through proper site planning and the use of appropriate building and construction techniques.

n. Require conditional use permit or equivalent entitlement for all development within the subject area.

Policy L7.1.3: Adopt policies for approximately 80± acres located east of the Antelope Valley Freeway approximately 440 feet north of Avenue S, west of 5th Street East and south of Avenues R-8 and R 12, which is designated as "Business Park" on the Land Use Map, to ensure that future businesses uses in this area will present an attractive visual appearance from the freeway and adjacent properties, and that development is sensitive to the physical, environmental and land use constraints in the area, as follows:

a. A master plan shall be prepared for the entire 80± acres prior to issuance of subsequent entitlement permits for individual parcels within the subject area.

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b. A Conditional Use Permit or equivalent entitlement shall be required for all development within the subject area.

c. All future development shall comply with the following architectural standards to ensure that development is low profile, well integrated with the natural topography and utilizes appropriate architectural elements and materials:

- 1 Building design should incorporate similar materials, form, and architectural details on all elevations to present a unified appearance.

2. To the extent feasible, building heights should be minimized through creative grading techniques such as partial subterranean designs to reduce above ground height of buildings when viewed from lower lying areas.

3. Building materials and colors should be chosen that enhance blending with the natural terrain. Highly reflective materials are discouraged.

d. Building heights shall be in accordance with underlying zone district requirements, however in no event shall building heights exceed two (2) stories or 35 feet in height as measured from the highest adjacent grade.

e. All landscaped areas and the future park site shall be improved and maintained by the developer or successors interest.

f. The developer or successor in interest will be responsible for retention and protection of natural vegetation in non-graded areas.

g. Parking areas should be screened from lower lying areas through use of berms, landscaping, or similar measures. Landscape plan concepts for parking lot areas should emphasize creation of a tree canopy by providing tree wells between parking spaces at appropriate intervals.

Policy L7.1.4 Ensure that development within the area generally located north of Avenue S-4 west of the A.V Freeway (also known as the Anaverde Hills) is compatible with and complimentary to existing development by requiring that future subdivisions provide a minimum 1 acre net lot area.

Special Development Designation

The Special Development (SD) designation is appropriate for areas for which focused planning efforts to ensure orderly and logical development in accordance with General Plan policies are ongoing. The SD designation is placed upon areas which, due to lack of infrastructure and public services, topography environmental sensitivity and development constraints, require comprehensive planning prior to development which goes beyond the level of detail normally

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associated with the General Plan. This planning could be accomplished through the Specific Plan process, although other methods may be acceptable if they provide the following: 1) A detailed implementation program, including facility phasing and funding; 2) carefully prescribed balance of development and open space within a Planning Area, in an economically feasible manner; 3) special regulations that are responsive to unique local conditions; and 4) necessary flexibility for long range planned community projects. *(General Plan Amendment 96-4 adopted by City Council April 9, 1997.)*

Other than single family dwellings on existing lots, development is primarily intended to be residential in nature, with a gross density of 0-2 dwelling units per acre. However supportive commercial uses are anticipated within the (SD) designation. Actual permitted residential densities and the location and intensity of commercial uses are to be determined based upon a site's capacity to accommodate the proposed development, considering such factors as availability of urban services; adequacy of existing and proposed roads to service the proposed densities; physical constraints, including slopes, drainage courses, faults, or similar features; compatibility with adjacent land uses; or other requirements of development, as identified through the review process. In no instance shall the density range established for this designation be interpreted as a guarantee of permitted density.

Upon preparation, review and adoption of one or more comprehensive Specific Plans or similar comprehensive

planning document(s) for property within this designation, higher residential density and the location and intensity of supportive commercial uses may be established based upon environmental, topographic, and infrastructural capacity of the land as defined by supporting documentation. With approval of such Specific Plan or comprehensive planning studies, a General Plan Amendment may be approved to amend the land use designation as determined appropriate pursuant to those studies.

Policy L7.1.11. Ensure that development within the Southwest Special Development Planning Area occurs in a logical and orderly pattern, and provides for timely and economical provision of infrastructure, compatibility with existing neighborhoods, sensitivity to environmental and topographic constraints, and establishment of proper buffering around the landfill, by requiring the following area-wide planning and infrastructural studies:

a. Urban development should not occur within the Southwest Special Development Area until area-wide plans establishing backbone infrastructure and carrying capacities of the area are completed to the satisfaction of the City including road, sewer water and drainage improvements.

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b. Infrastructure plans shall contain an analysis and establishment of municipal facility needs for the area, including, but not limited to, parks, schools, libraries, maintenance yards, public trails and greenbelts, satellite police and fire stations, or similar facilities deemed necessary as a result of urban development within the Southwest Special Development Area.

c. A method for financing infrastructural and facility needs shall be established that equitably allocates costs among property owners who will benefit from these improvements.

d. Alignments of streets and arterials serving a regional function shall be established to the extent feasible, including but not limited to Avenue S and City Ranch Road.

e. Plans for sewer line extensions to the area shall provide for gravity flow systems, to the extent feasible.

f. Development within hillside canyon areas shall provide adequate means of ingress and egress, with secondary access required.

g. Compatible residential land use designations shall be established adjacent to existing residential neighborhoods.

h. Land use designations shall be established that provide a minimum 1,000 foot buffer between the ultimate landfill boundaries and residential uses.

1. Significant ridges within the highly visible upper elevations of Verde Ridge and the Sierra Pelona foothills shall be preserved as natural open space.

j. Market feasibility studies and locational analysis shall be provided to determine appropriateness of commercial site(s) as part of any Specific Plan or comprehensive plan submittal. Where deemed feasible and appropriate, the commercial uses should be evaluated based on their potential impact on existing land uses, the anticipated service area and proximity to the regional transportation network. Design of any commercial facilities shall be compatible with the overall community design theme.

Environmental Resources Element:

Policy ER1.2.2: The following roadways are designated as City scenic highways. Apply special design standards for projects adjacent to these highways in order to protect their scenic qualities.

- a. Barrel Springs Road
- b. Tierra Subida Avenue
- c. Sierra Highway South of Avenue S
- d. Elizabeth Lake Road
- e. Pearblossom Highway
- f. Bouquet Canyon Road
- g. Godde Hill Road

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Policy ER2.1.4 Preserve natural drainage courses and riparian areas where significant concentrations of ecological resources exist.

Policy ER4.1.4 Require that all new commercial, industrial, and residential development connect to sanitary sewers as required by Policy PS2.2.4 of the Public Services Element.

Policy ER7 1.1. Identify and recognize historic landmarks from Palmdale's past.

Public Services Element:

Policy PS2.2.4 Require that all commercial, industrial, institutional, multiple family and single family residential uses with lot sizes of less than one acre be connected to a public sewer system.

Safety Element:

Policy S1.1.9 Review development proposals located in or immediately adjacent to areas of soil instability liquefaction areas, and steep slopes to determine if a significant constraint exists and to determine appropriate land use or hazard mitigation methods, and require compliance with any such measures identified.

Policy S2.1.4. Require that development in areas near high-pressure natural gas lines be buffered from them and provided with alternative access/evacuation routes.

Appendix A-General Plan Policies
Avenue S Corridor Area Plan

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Appendix B Community Design Guidelines for the Avenue S Corridor

The following community design guidelines are applicable to new commercial development within the commercial zone districts located within the Avenue S Corridor Area Plan boundaries. New development within the Corridor will be required to adhere to these guidelines.

ARCHITECTURAL DESIGN GUIDELINES

1. Building Massing

- a. Volume. Single large mass, “big box” structures should be visually broken up through variations in parapet heights and pitched roof elements. Minimize flat roof areas visible from higher grades or buildings, such as the freeway and neighboring hillside to the southwest.
- b. Views. The height and massing of any structure should take into consideration preservation of the view corridors, where appropriate, of the desert, hills, mountains, and lakes. Additionally what the structure looks like as viewed from the freeway and neighboring hillsides should be considered. In this regard, pitched roofs create a more pleasant appearance when viewed from higher grades and help to reduce the perceived mass of the structure. Appropriate massing of one or more buildings can frame scenic views,

giving them more importance than if the buildings did not exist at all.

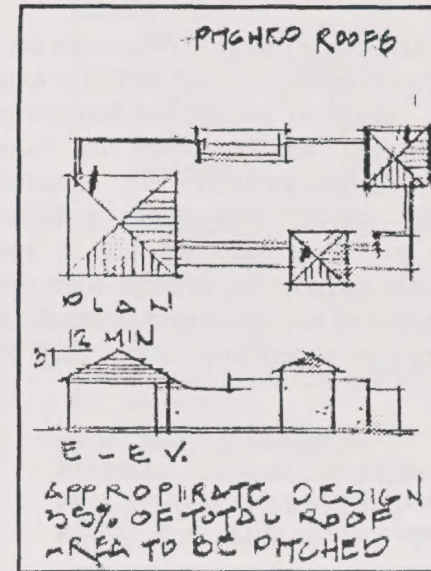


Figure B-1. This sketch shows variation in building mass.

Source: Ewing Architects, Inc.

- c. Open Space. Open space may be used to accentuate the structure on the property and within the structure itself, such as a stepped back second floor courtyards, patios, etc. along with creating visual interest, courtyards and patios provide shelter from the winds and severe

heat. In office developments these “oases” can become public and/or employee seating areas. Incorporating landscaping within these areas increases their function, usefulness, and visual value.

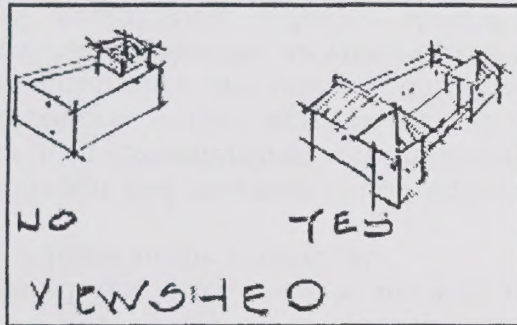


Figure B-2: The pitched and varied roofline provides interest and can be designed to frame viewsheds.

Source: Ewing Architects, Inc.

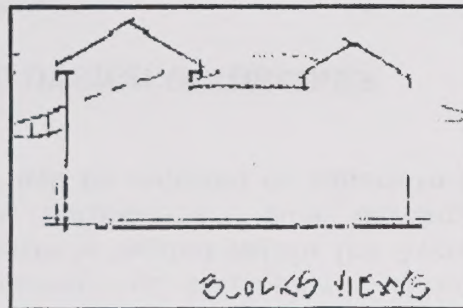


Figure B-3: Views can be blocked if building design is not considered with respect to the view.

Source: Ewing Architects, Inc.

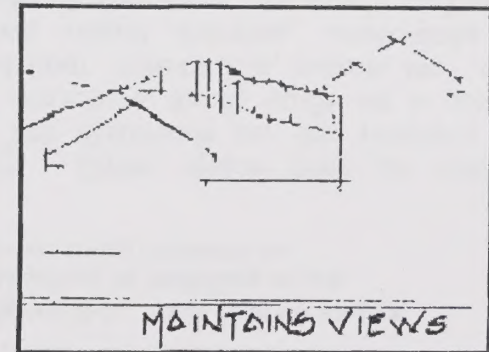


Figure B-4: This sketch shows how varying the roofline can preserve views of the hillside.

Source: Ewing Architects, Inc.

- d. The Site. The placement of a building on its site can greatly influence its perceived mass. A large structure should be further away from the street than a smaller building. A facility might be designed to be two stories rather than one to minimize its footprint on the site leaving more room for landscaping, parking and perhaps enhancing its visual interest. Landscaping also plays a major role in making the structure appear to be an integral part of the site.
- e. Landscaping. Landscaping should be integrated with the building and site. Shade trees along with xeriscape plantings provide a visual and physical relief from the intense sun while complementing the desert climate. Landscaping can be used to complement or modify a building's

perceived scale and mass by screening some portions of a structure while accentuating others, such as the entry. The use of indigenous rocks in the landscape design, such as river rock, is strongly encouraged. On-site landscaping should make full use of a variety of desert plants while providing shade trees which complement and work with the local environment. All landscaping materials should utilize efficient water irrigation systems and drought-tolerant plant materials. Landscaping is a relatively inexpensive method of enhancing the value and quality of a project.

- f. **Contextualism.** Buildings should embrace the history, character and environment of the City of Palmdale in their designs. Corporate prototypes which ignore their surrounding neighborhood are strongly discouraged. All structures should tailor their designs to this specific area and should consider the placement, scale, mass, design and architecture of surrounding development in order to create a cohesive district. However, if a neighboring building was built before these guidelines were adopted and/or lacks the preferred theme of these guidelines, it should not be used as a model in developing a new building's design scheme.
- g. **Building facades.** Setbacks for building facades, particularly those fronting Avenue S, should be staggered within and between structures to create an articulated elevation that plays with light, shadow and shade. Historic elements such

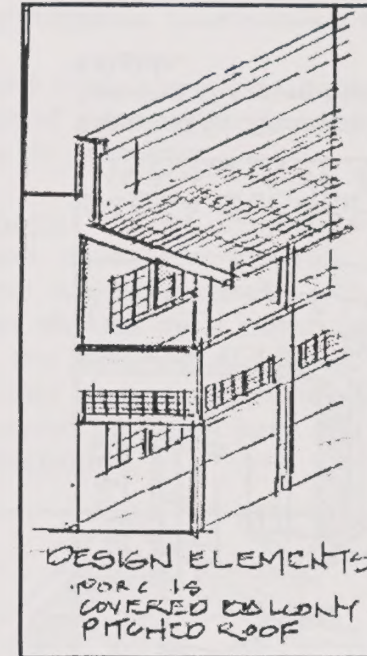


Figure B-5: Conceptual sketch of historic architectural features which provide interest to building facades.

Source: Ewing Architects, Inc.

as wide porch recesses, covered balconies, pitched roofs, etc. should be used to achieve this effect. This staggering or offsetting of the facades is encouraged to create relief between structures, in addition to varying architectural treatments such as materials, colors and finishes, windows and doors, roofs and heights of structures.

- h. Continuity As seen in the photograph of old Palmdale Schoolhouse (shown in Photo 6-2), all four sides of buildings were architecturally treated. In keeping with this design practice, elements of the front facade treatment and architectural style should be continued on all visible sides or portions of a building. The degree of architectural detail can be less on facades which are not highly visible; however colors, materials and some architectural details should be provided for continuity purposes.
1. Building height. The perceived overall mass of a block of buildings should be broken up by varying building height.

The following guidelines pertain to building height:

1. When buildings are within 20 feet of each other the building height should be a minimum of 36 inches higher or lower than the adjacent buildings.
- ii. If a proposed structure is in between two buildings which are already varied in height by 36 inches and one building is at the maximum allowable height, the new structure should split the difference at approximately 18 inches.

- iii. In instances where a proposed building cannot vary the height, then a variation in roof style from the immediately neighboring buildings can be used to differentiate them. For example, if the existing buildings have pitched roofs, then an articulated parapet wall would set the proposed structure apart from them.

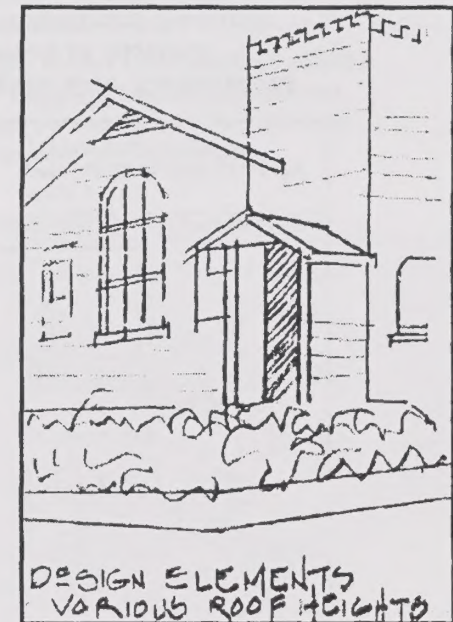


Figure B-6: Conceptual drawing of varied building heights.

Source: Ewing Architects, Inc.

- j. Strip commercial centers. In order to provide visual interest within strip commercial buildings, it would be preferable if each unit in a single story retail/office complex is distinguished by a different roof height, footprint, setback, etc. to create a village-like appearance instead of one single monolithic strip center. However this is not always possible; therefore, the building should provide differentiation in other ways such as projecting each unit at different widths, utilizing different materials or colors, or providing parapets at different heights to simulate building height variation. Seating areas should also be provided with adequate shelter from the sun, wind and snow

2. Roofs

- a. Roofline variation. Variation in the roofline will add visual interest to the skyline of the Avenue S Corridor. A significant portion of the total roof area should be pitched elements distributed in a manner which creates visual interest; a guideline would be at least one third of the roof area to be treated in this fashion. The pitched roof areas should not be placed into one single element on the building leaving the remainder of the roof flat, particularly if all sides are visible. For purposes of these guidelines "flat roofs" shall be defined as any roof with a pitch of less than 3.12. This variation in the volume, massing, and roofline will give the building more visual interest,

creating an assemblage of elements with a village-like appearance.

- b. Roofs. Pitched roofs should be between 3.12 to 7.12 and extend approximately 20 feet into the building from its perimeter
- c. Roof projections. Roof projections such as overhangs and eaves are strongly encouraged and have been used historically. The length of the projection should be a minimum of twelve inches from the building facade or posts (if a porch or balcony roof), except if forming a porch or similar element in which case any reasonable distance is acceptable.



Figure B-7: Gabled roof projection with oversized eaves and articulated window.

Source: Ewing Architects, Inc.

- d. Mansard roofs. Because they lack historical context, mansard roofs are strongly discouraged in the Avenue S Corridor
- e. Roofing. Preferred roof materials are asphaltic fiberglass composition shingles, cementitious (Class A) shingles or shake tiles, two piece, Mission barrel clay tile, "S" tile, slate or standing seam metal roofing with a factory applied color (dark, subdued colors are preferable). All tile types should be matte finish with variegated color patterns. All roofs (clay shingle, etc.) should have a triple starter course at the eaves. Plastic, fiberglass, or wood types of roofing materials are strongly discouraged.

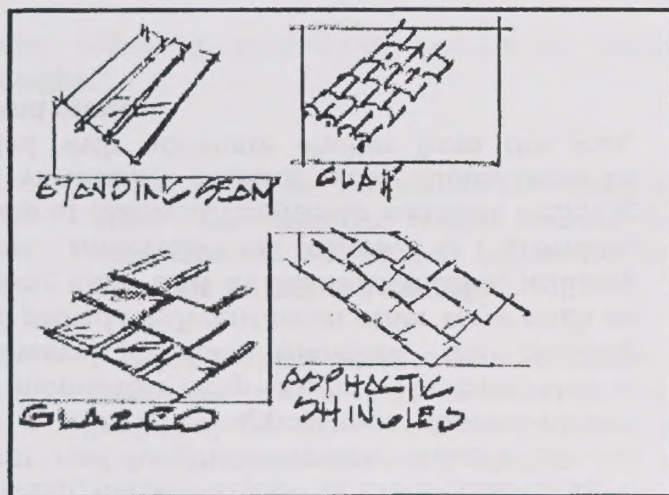


Figure B-8: Examples of preferred roofing styles.

Source: Ewing Architects, Inc.

- f. Roof-top equipment. Roof-top equipment should be screened from public view either through parapets, gables or some other architectural feature, or should be ground mounted if architectural screening is not feasible.

3. Architectural Projections

- a. Covered walks. Covered entry porches with roof overhangs or extended second floors, which have a historical precedent, are encouraged to provide comfort and shade. The second floor level could be enclosed space or an open balcony over the porch area. Landscaping could also be used to complement such architectural features creating a canopy effect.
- b. Parapet walls. Parapet walls are acceptable and can be detailed with trim and moldings or left plain depending on the character of the design. The visual appearance of flashing should be minimized by using color matching the wall and a narrower overlap where practical.
- c. Trellises. Heavy wood detailed trellises have been used historically and are encouraged. Main beams should be 6x8 or larger secondary beams 4x6 or larger trellis members 3x4 or larger. Small wood members, with widths of two inches or less are discouraged. Detailing should control wood to keep twisting and warping to a minimum. Acceptable framing hardware include

bolts and custom steel connectors; prefabricated connectors which may be visible are discouraged.



Photo B-1. This photo of the Palmdale Inn demonstrates the historical use of trellises, roof variation, eave overhangs, covered balconies and second story projection.

Source: Ewing Architects, Inc.

- d. Awnings. Awnings are encouraged only in protected areas where they can be maintained because of strong winds in the Antelope Valley. If fabric awnings are proposed, they should be designed to look like a cohesive element of the building's style, not as an add on. Exposed structural steel supports or ribbing are encouraged. Awning fabric with the "look" of a natural canvas material with a matte finish of solid desert colors is preferred; stripes or other

repetitive printed patterns are discouraged. Printed logos and graphics which will complement the color and design of the building are acceptable, if they are in conformance with the City's Sign Ordinance. Back lighting is encouraged for soft night lighting effects.

4 Architectural Openings

- a. Cohesiveness. Architectural openings such as windows, doors, entryways and arches should be similar representative of local historical themes, and coordinated within a structure or facade. Combining a wide variety of opening styles such as rectangular, arched, round and/or irregular within any one building is discouraged.
- b. Windows. A generous number of windows is desirable to enhance the visual interest to passerby pedestrians and vehicles. Large expanses of blank walls are discouraged.

The following guidelines pertain to window placement and design.

1. Windows should have applied trims and be recessed into the wall, not flush mounted to the exterior. This is more characteristic of the historic architecture and creates greater visual interest in the design.

- ii. Multiple divided lights (window panes) are encouraged rather than large expanses of single sheets of glass. This adds to the historical character being developed for this locale, and reflects windows of the historic railroad houses (Photo 6-6 and 6-7), Palmdale school house (Photo 6-2) and Palmdale Grammar School (Photo 6-4).
- iii. Windows should have a two color scheme (to distinguish them from the building) with sashes being a separate yet harmonious color from the window trim.
- iv. Approximately 30% of the building's frontage should be glazing (window and door combined). Glazing should not become so dominant, however so as to create an all-glass facade which is not historic and just as monotonous as a solid wall.
- v. Provide adequate shading of windows on the south elevation of buildings by the use of overhangs, awnings and the like. Avoid mirrored or tinted glazing.
- vi. Window frames may be factory colored metal, wood or vinyl. Colors such as dark brown, forest green or similar dark vinyl clad or painted wood are acceptable, as are metal frames with a factory applied finish. White, beige or other light color

vinyl clad window units are undesirable. Natural, bare aluminum frames/sashes are also discouraged.

- vii. Windows should have substantial sashes, at least 1 1/2" wide, rather than a thin profile style.

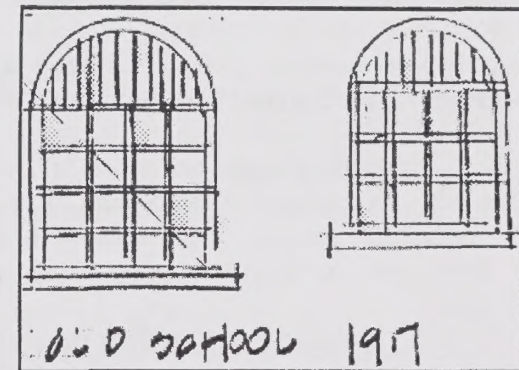


Figure B-9: These windows demonstrate the use of dividing lights.

Source: Ewing Architects, Inc.

- viii. Window sills which project from the face of the wall (approximately 1 to 2") are strongly encouraged since they add detail and depth to the design and have been used historically

- ix. Window sills should be elevated above paved ground level approximately 18" 30" unless directly abutting a planter or other such landscaped area in which case the sills can be at floor height.

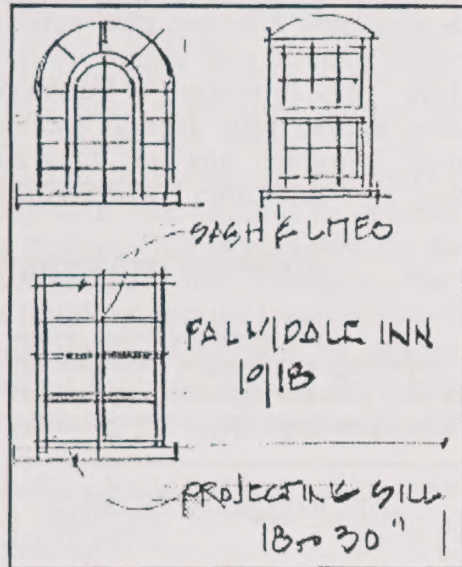


Figure B-10: This sketch demonstrates the use of sashes, window projections and divided lights.

Source: Ewing Architects, Inc.

- c. Doors. Doors should be solid wood or hollow metal with multiple pane glazing in keeping within the historical context of Palmdale. All glass doors or with a minimal amount of frame are discouraged. Door hardware and finishes should be quality metals and complement the historical style of the building. Push-pull bars or push-pull plates (other than panic type) are discouraged.

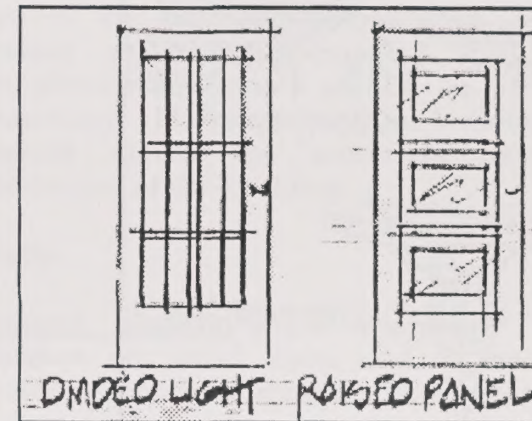


Figure B-11. Doors with multiple panes or raised panels are encouraged within the Corridor.

Source: Ewing Architects, Inc.

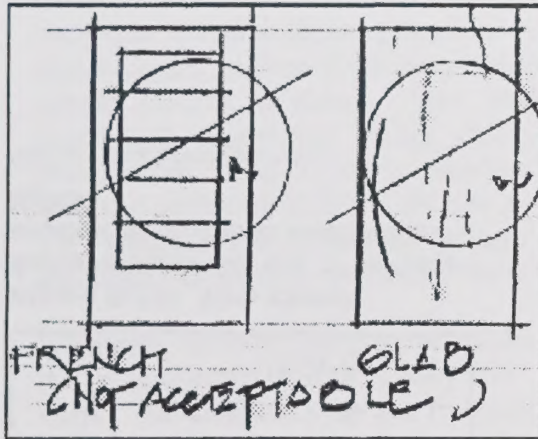


Figure B-12: Plain slab or french doors are not historically correct and are discouraged within the Corridor.

Source: Ewing Architects, Inc.

5. Architectural Elements

- a. Architectural character The architectural character of the building should convey a timeless quality that avoids directly copying or recreating a particular era. Architectural forms such as gabled and pitched roofs, eaves, covered porches, and building materials which are part of Palmdale's history are encouraged.
- b. Alcoves. Alcoves for entries can be setback from the main building facade. Approximately 8-10 feet is suggested.

- c. Building facades. The building's design should avoid large monotonous facades fronting the street by providing doors and windows no more than 5 feet apart, and supplemented with other architectural features such as overhangs, porches, cornices, etc.

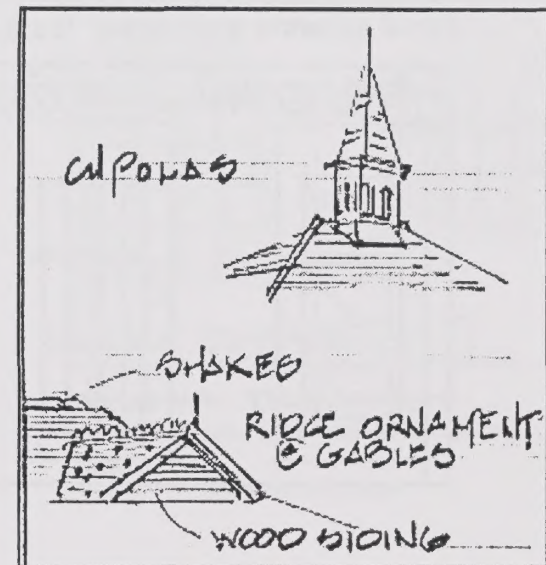


Figure B-13: Ornamentation, such as that demonstrated above, has been used historically and is encouraged within the Corridor.

Source: Ewing Architects, Inc.

- d. Architectural detailing. The architectural detailing of the facade should be achieved by the use of cornices, wainscots, overhangs, porches, window sills, etc. Integrate historical elements such as those seen in the old Palmdale Schoolhouse. These elements include cupolas atop roof ridges, exposed metal gutters and downspouts (copper or painted, not bare galvanized metal), towers, ridge ornamentation, short roof eave overhangs, lattice work screens, etc. as shown in Figure B-13. Any such combination of elements should be used in harmony with one another to achieve a cohesive, quality design. This is achieved, in part, by using like materials for like elements. For example, a stucco building should typically not have a brick or stone tower it should be stucco as well; a wood sided building should have wood detailing, such as for cupolas and ridge ornamentation.
- e. Sustainable architecture. Use of ecologically minded materials and methods of construction are encouraged, whenever possible. This can be accomplished in variety of ways, such as using recycled steel for reinforcing bars, low VOC carpet adhesives, or composite wood members which waste less material and do not use old growth trees. The custom of lessening up-front costs by using cheaper materials can result in a poor quality high-maintenance facility which is wasteful of natural resources in the long term.

- f. Concealment of utilities and equipment. All electrical, cable, plumbing conduits/piping, HVAC equipment and ducting, etc. should be concealed from public view

6. **Architectural Materials**

- a. Quality Building materials should be selected for their architectural harmony aesthetic quality durability and ease of maintenance. They should convey an attractive appearance, solid image, lasting value and quality A variety of harmonious materials should be used to avoid monotony Materials used on building additions should match the materials used on the remainder of the building.

7 **Walls**

- a. Cement plaster (e.g. "Stucco"). Acceptable finishes are sand, light and/or medium dash, and/or smooth troweled. Heavy hand troweled textured stucco finishes were not utilized here historically and are therefore discouraged. Painted final color finishes are preferable to integral color plaster to allow for matching the surface after any repairs may be done.
- b. Brick. True double-course (double wythe) construction or a full brick depth veneer is encouraged. Real or synthetic veneer (thin) brick is discouraged.

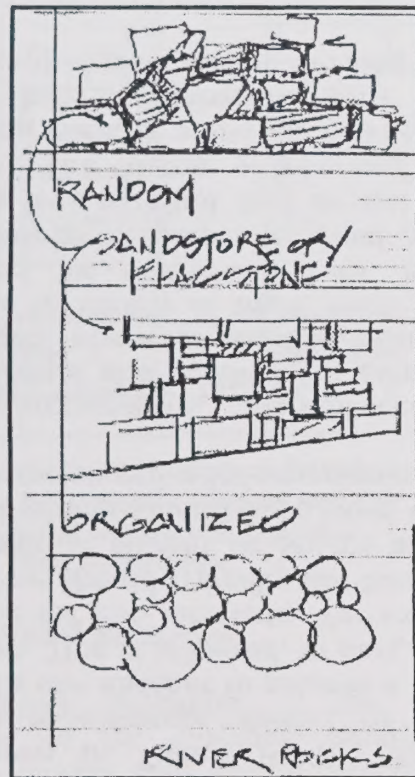


Figure B-14: The above materials are encouraged.

Source: Ewing Architects, Inc.

- c. Wood. Wood siding has been used historically as evidenced in the old Palmdale Schoolhouse located at McAdam Park and is acceptable; however it should be finished material and quality workmanship. Roughsawn or rustic-type wood should not be used for buildings.

- d. Veneer stone. Preferred stone veneers are sandstone and flagstone laid in natural shapes (fitted) or in organized, cut or chopped stone stacks which use desert colors. All stone veneers should be designed to look like a natural, full course and not appear as a veneer.
- e. River rock. This material has historical context given the proximity of Littlerock Creek; therefore, this material is encouraged in buildings and landscaping to complement the building (see landscaping suggestions).
- f. Concrete block. Concrete block is acceptable but should be limited in its use in highly visible areas. Preferred block sizes in visible areas are 4 and 6 high units (no 8" or 10" units) laid in even block modules, with heavy concave mortar joints (natural mortar color). Desert colors including "black" are preferable. Discouraged colors are standard tan, standard gray or cool colors. Preferable block textures are exposed aggregate finish or sandblasted finish. The Palmdale Playhouse provides an example of the use of precision blocks, sandblasted to expose the natural aggregate character of the block. This method is encouraged within the Corridor "Designed" and/or split face or slumpstone finishes/surfaces as well as mixing various types of block textures within a wall are discouraged. It is acceptable to develop articulated detailing within the block pattern. Exposed decorative concrete block is acceptable for subdivision walls.

- g. Wall bases (Wainscots). Wall bases are encouraged and should generally be limited to the same materials, colors and finishes as the wall they are a part of. Preferred wall base materials are wood, brick/masonry G.F.R.C. (glass fiber reinforced concrete), cast concrete, ceramic tile or sandstone. Refer to Photo 6-2 of the Palmdale Schoolhouse for an example of an acceptable wall base concept.
- h. Anti-graffiti. All wall (and other applicable) surfaces should be graffiti resistant or treated with an anti-graffiti sealer or use landscape barriers (i.e. vines, thorny plants). The intent is to deter graffiti on surfaces that might be accessible or inviting to vandals. This will reduce maintenance costs on the part of the owner and preserve the neighborhood's appearance.
- i. Materials to be avoided. Highly reflective surfaces (glass or steel) and metal or plastic siding do not complement the desert environment or reflect this area's historic past, and should be avoided. Steel elements and glazing for windows and doors are acceptable; however the amount of this material should be limited.

8. Walkways

- a. Paving surfaces. The use of sandstone pavers, and textured or colored concrete for walkways is preferred over standard concrete for walkways.

9 Public Seating

- a. Public benches. Benches intended for public use should be integrated into the design by being recessed into an alcove/niche of the building or if on or near the public sidewalk should be bordered on both sides by planters or pots.

10. Building Colors

- a. Color palette. The color palette should be in the desert hues, ranging from light to medium pastels. Heavy deep base colors are discouraged for large architectural surfaces, but may be used for accent detailing in banners, signage, etc. The color palette for a structure should be coordinated with base, secondary and accent colors and this palette should harmonize with adjacent buildings. However if a neighboring building was built before these guidelines were adopted and/or lacks the preferred color palette it should not be considered in developing the new building's color scheme. Preferred colors are earth-desert (warm) tones ranging from off-white to rust, mauve to pastel purple and warm gray "Cool" colors are undesirable for the base (body) of the building but could be used as accent colors. Understated color schemes are preferred for the dominant body of the building with accentuated trims, window sashes, doors, etc,

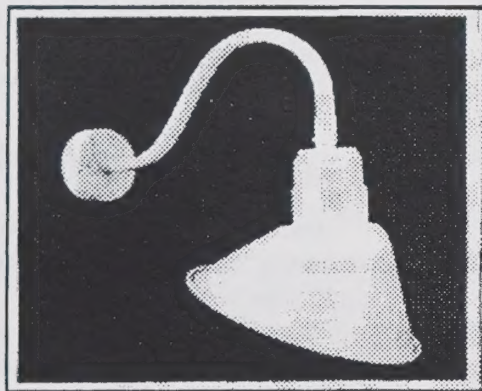


Figure B-15: Recommended light fixture design.

Source: Ewing Architects, Inc.

11. Lighting

- a. Lighting fixtures. Implement lighting fixtures which evoke a sense of history such as reproductions of gas" or electric cast iron city street lights. Also simple, old style industrial fixtures are acceptable such as the fixture shown below
- b. Fixture colors. Forest green and copper colors are preferred lighting fixture colors within the Avenue S Corridor
- c. Site lighting. The site lighting, such as building and parking lot lighting and design, should prevent glare in surrounding residential neighborhoods and adjacent roadways. Lighting

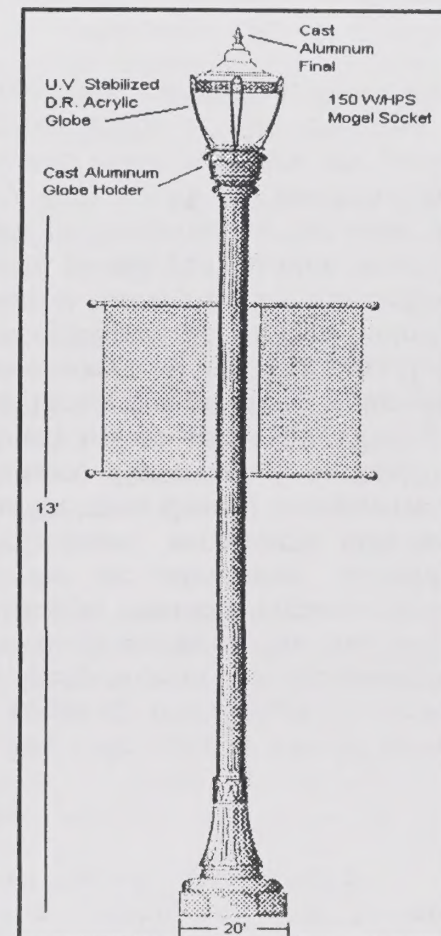


Figure B-16: An example of a traditional light standard used elsewhere in Palmdale.

Source: Southcoast Lighting & Design

should be unobtrusive and minimize light pollution to preserve the ability to see the clear desert night sky

- d. Accent lighting. Indirect lighting, where the light source is not visible, such as in soffits or recesses in the architecture, is desirable. Uplighting (wall washers) should be hidden in planters/landscaping.
- e. Exposed lighting. Exposed fixtures should match the architectural style of the structure. Small bulb, low voltage type lighting in trees, planters or display windows is desirable and provides atmosphere. Exposed light fixtures and conduits on roofs and walls and exposed glaring bulbs are discouraged.
- f. Public lighting. All lighting fixture locations, height and design are subject to the requirements of the City's Zoning Ordinance.

12. Signage

- a. Sign area and location. All project signage will be subject to the criteria contained within the Palmdale Zoning Ordinance.
- b. Design. Signs mounted onto the building should integrate with and complement a building's design, such as on the parapet wall. Ground mounted monument signs should complement

the building by incorporating the colors and materials used for the primary building.

- c. Lighting. Individual internal illumination of each character of the sign is preferred over internal illumination of the entire sign. External up-lighting of ground mounted signs is encouraged and provides an aesthetic appeal to the sign.

STREETSCAPE DESIGN GUIDELINES

1. The Streetscape

- a. Street medians & landscaping. Avenue S is proposed to be redesigned with a median which signifies its importance as major roadway. Landscape plant material within the median will consist of desert plants which complement the native environment of Palmdale. Signage will be incorporated at appropriate locations as conceptually demonstrated in Figure B-17
- b. Parkway landscaping along the roadway. Landscaping along the roadway. Trees interspersed with desert plantings to accentuate the corridor should be introduced. Appendix B provide a schematics for parkway landscaping, including plant material. Earth berms with varieties of desert plantings should be utilized to screen parking lots, personal storage facilities and other uses which utilize outside storage areas such as RV storage lots.

- c. **Lighting.** In low density residential areas, the number of street lights should be kept to the least number of standards possible in order to preserve the rural atmosphere. Lamps visible from higher elevations or adjacent to residential areas are to be shielded to reduce off-site glare. However lighting must also ensure adequate illumination for vehicle safety
- d. **Bike way** A Class I Bikeway is designated along Avenue S within an existing gas line easement along the south side of the street. The bikeway is proposed to be a separate off-street path allowing for two-way bicycle traffic, measuring approximately 12 feet wide.

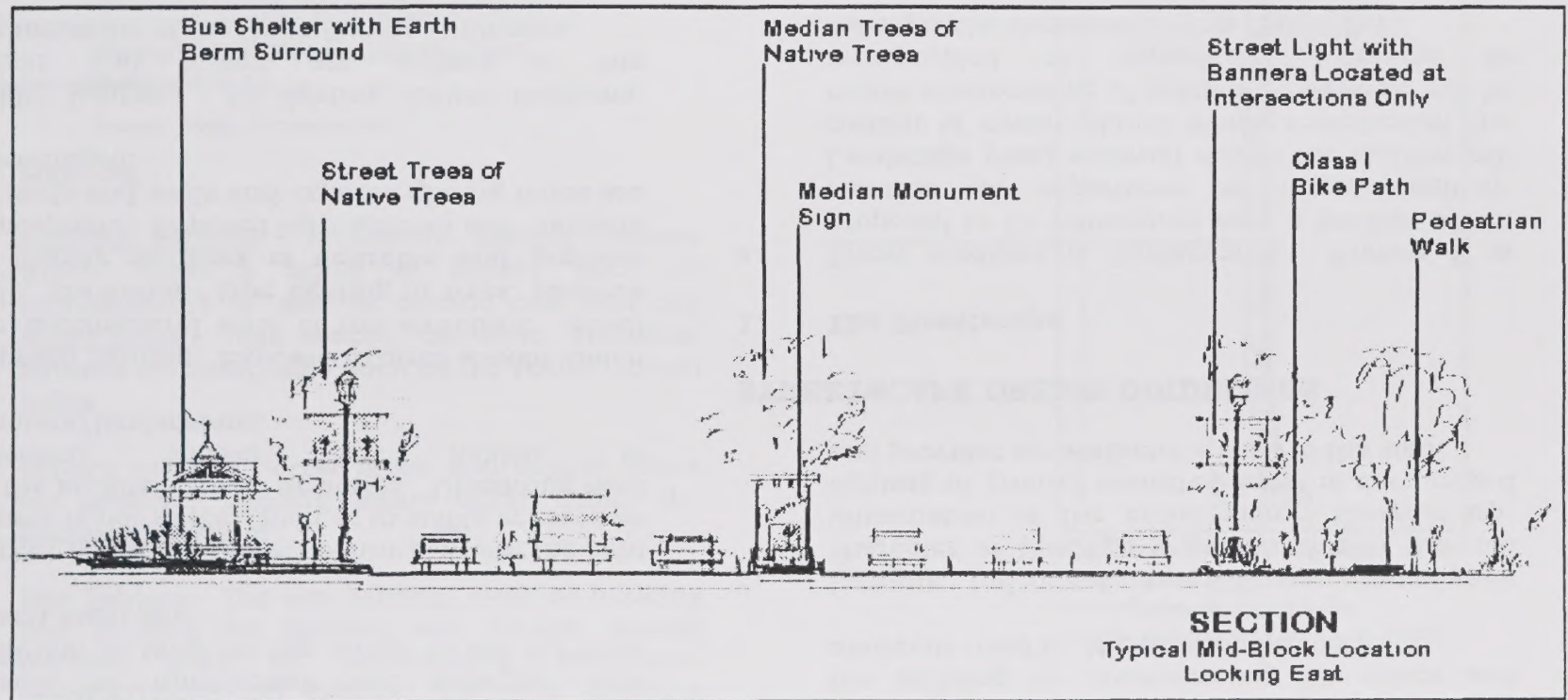


Figure B-17. Conceptual cross-section of Avenue S streetscape.

Source: Ewing Architects, Inc.

- e. Multi-purpose trail. A Multi-Purpose trail is proposed to be developed along the north side of Avenue S generally between Calle Grillo (immediately east of the freeway) to the California Aqueduct, within the west portion of the Corridor area. This trail will connect to designated trails within the City as shown in General Plan Exhibit PRT 2 (Multi-use Trail Plan) and designed in accordance with General Plan Table PRT 2 (Trail Standards).
- f. Bus stop benches and receptacles. The City's Transit Related Amenities Program (Resolution No. 96-54) sets the standard for public transit amenities, requiring the furniture to be designed of powder coated, tubular steel material treated to reduce rust and graffiti and ivy green in color (see Photo B-2). The Resolution further outlines the placement of the furniture in relation to the posted bus stop sign.

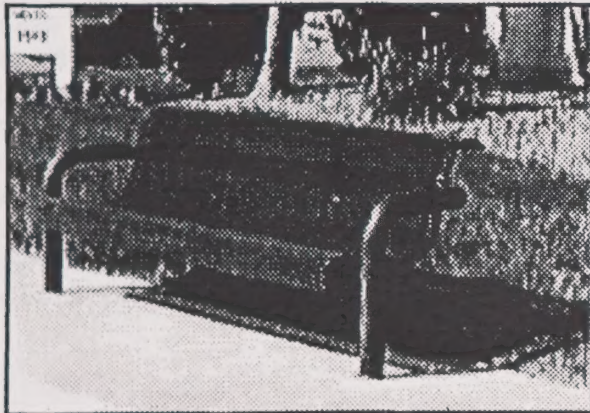


Photo B-2: Bus benches currently being installed throughout the City

Source: City of Palmdale Planning Department

- g. Subdivision walls. The following guidelines pertain to subdivision wall placement and design.
- i. Subdivision walls should be decorative and have varied setbacks to increase visual interest.
 - ii. The design of walls, fences and pilasters, including materials, color and finish, should be compatible and complementary with the character of the surrounding area and site architecture.
 - iii. When a change in grade elevation or other transition occurs within wall segments, the wall or fence should be stepped in equal vertical intervals not to exceed 12 inches in height. The ends of walls should return into the site to maintain a finished appearance.
 - iv. Long stretches of unrelieved flat wall are to be avoided. The design of walls should incorporate off-sets and pilaster. Where subdivision wall are located along scenic highways, the walls should incorporate view-fencing which maintains the viewshed.
 - v. Curvilinear sections in walls may be incorporated into the design if they are compatible with the overall desired character of the development.

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Appendix C Landscape Design Standards for the Avenue S Corridor

Appendix C provides guidelines for landscaping within the Avenue S Corridor. Exhibits are included for enhanced gateways, parkways, and the Avenue S medians. All new development within the Avenue S Corridor will be subject to these guidelines.

GATEWAY LANDSCAPING

Avenue S/14 Freeway Gateway A strong planting theme will be established at the freeway on and off-ramps utilizing existing right-of-way wherever possible. The landscape tone will be set by utilizing native and compatible plant species that reflect the high desert environment. There are excellent native species, especially California Juniper species within the on and off ramp rights-of-way that will be used as the foundation for the desert planting. The proposed planting as shown in Figure C 2 will complement and anchor any monumentation proposed for this location. Specimen desert trees such as Mesquite and Palo Verde will be utilized to set the scale and tone of the landscaping in this area. Once the enhanced gateway is implemented within the Corridor it is anticipated that this concept can be extended to other entry points and intersections within the City.

Avenue S/Sierra Highway Median and Gateway As shown in Figure C 3 the planting at the Avenue S and Sierra Highway intersection will support the change in use along Avenue S and the importance of this gateway into Palmdale. The planting within the right-of-way and center medians will transition from the rural planting to the south and west of Sierra Highway to the commercial landscaping to the east and north. The planting will accentuate any gateway signs or walls promoting a strong sense of arrival to the City. Indigenous or compatible plant material that complements the high desert will be utilized and the landscape material will take on a formal or architectural style at this location to signal the change in use. Low ground cover and shrub planting will be placed in drifts with a rock mulch. Mesquite, Palo Verde and other desert trees will be used whenever possible to promote the use of appropriate plant material along the corridor. The plant material can be incorporated into future commercial developments as well, creating a unifying landscape theme. The median and gateway concept is shown in Figure C 3.

Appendix C—Landscape Design Standards
Avenue S Corridor Area Plan

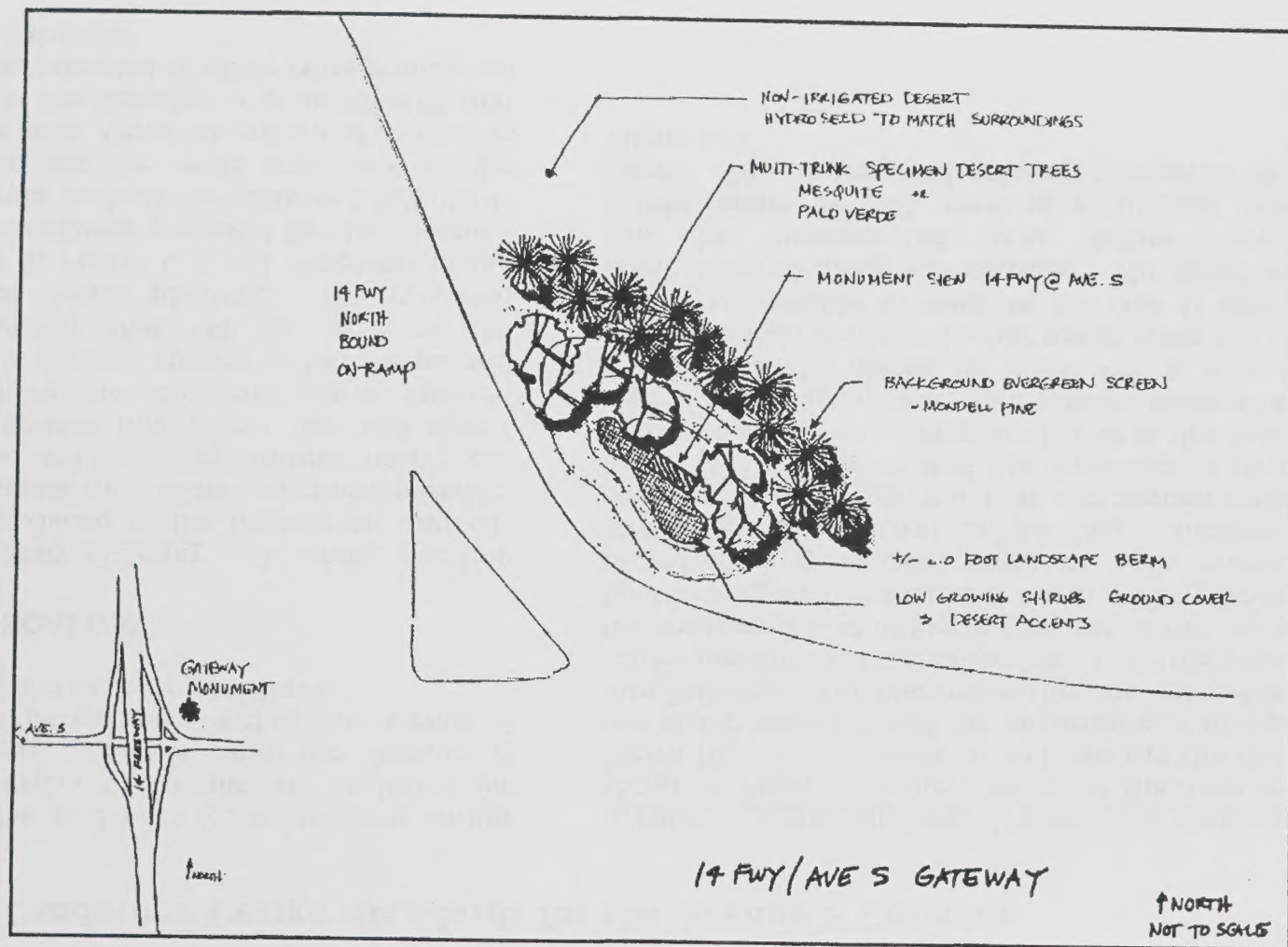


Figure C-1. Enhanced gateway schematic.

Source: City of Palmdale Landscape Architect

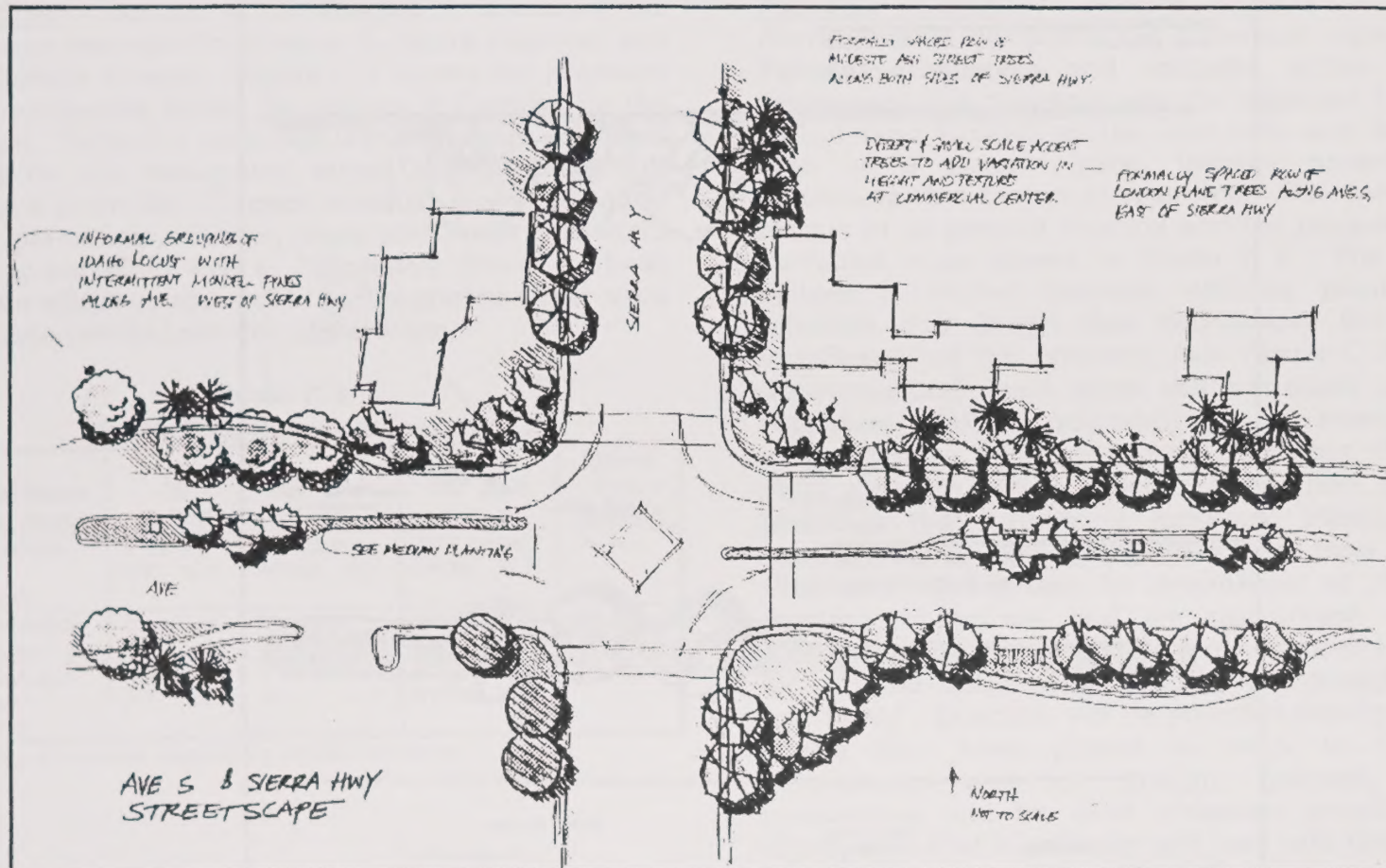


Figure C-2: Enhanced gateway schematic for the intersection of Avenue S and Sierra Highway

Source: City of Palmdale Landscape Architect

Appendix C—Landscape Design Standards
Avenue S Corridor Area Plan

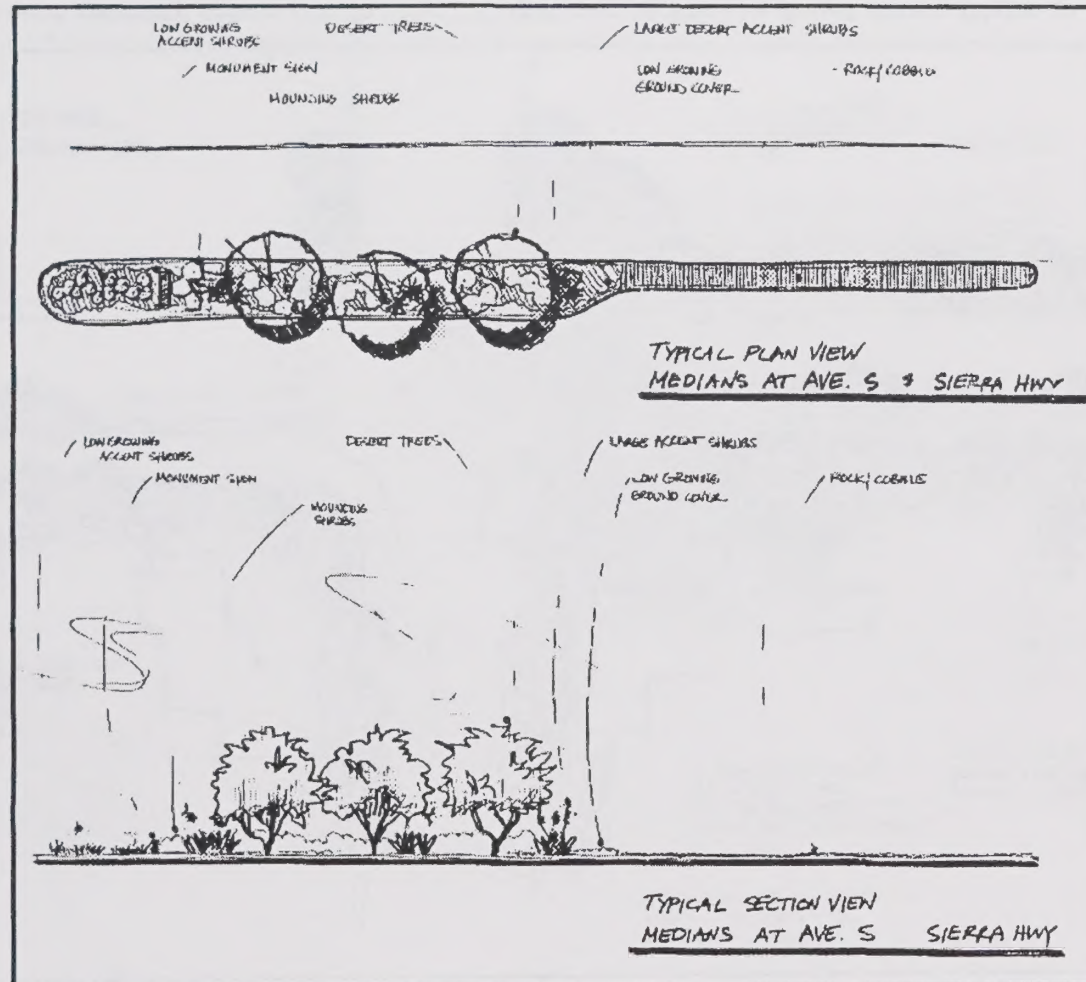


Figure C-3: Typical section and plan views of Avenue S median.

Source: City of Palmdale Landscape Architect

STREET TREE LANDSCAPING

Street Trees. Section 6.3 of Chapter 6 discussed the streetscape concepts for Avenue S, Sierra Highway and Tierra Subida Avenue. Figure C-4 shows the proposed street tree species within the Avenue S Corridor for the roadways. Table C 1 indicates the acceptable sizes and spacing for the designated street trees. Table C 2 provides a plant list of desert accents, grasses, ground covers, perennials, shrubs, trees and vines that have proven to establish well in Palmdale's climate. Those materials which complement the designated street trees will be incorporated into the streetscape.

Table C-1.
Street Tree Size and Spacing

Botanical Name Common Name	15 Gallon	24" Box	36" Box	Street Tree Spacing
Fraxinus velutina "Modesto" Modesto Ash	1" caliper 7-8' 2-3'	2" caliper 10-12' 4-5'	3 ½" caliper 14-16' 6-7'	30 feet
Platanus acerifolia London Plane Tree	1" caliper 7-9' 2-3'	2" caliper 10-12' 4-5'	2 ½" caliper 14-16' 6-7'	30 feet
Robinia ambigua "Idahoensis" Idaho Locust	1" caliper 7-8' 2-3'	2" caliper 10-12' 4-5'	3" caliper 12-14' 5-6'	30 feet

Source: City of Palmdale Engineering Design Guidelines

HISTORIC PASSIVE PARK LANDSCAPING

Palmdale Cemetery Passive Park. Chapter 2 (Environment) discussed the historical significance of Palmdale Cemetery and includes action items to incorporate the cemetery into the adjacent 12 acres of vacant land located on the east side and develop the area as a passive park, thereby preserving and enhancing this historical resource. The cemetery will remain in its present location and the passive park will surround it as shown in Photo C 1. The park will include a central location utilizing plant material selection and design that emphasizes the historical significance of the cemetery (see Figure C 5) and the remaining park land acres will transition into native vegetation planted informally or as existing in its natural state. Proposed planting within the central point includes broad canopy shade trees and shrub plantings that express a historical planting in the desert. Low broad canopy shade trees, such as Chinese Pistache, may be reminiscent of plantings of fruitless mulberries, and are encouraged within the palette. Pathways will lead to a rose garden surrounded by a formal hedge of shrubs that are drought tolerant and hardy. Benches will be provided nearby. Familiar plants that have proved to work in the desert environment and are drought tolerant, such as pyracantha, will be used whenever possible. It is anticipated that a pathway will lead into the cemetery. In order to create continuity a formal planting of roses and shrubs can also be incorporated along the west and south boundary walls of the cemetery.

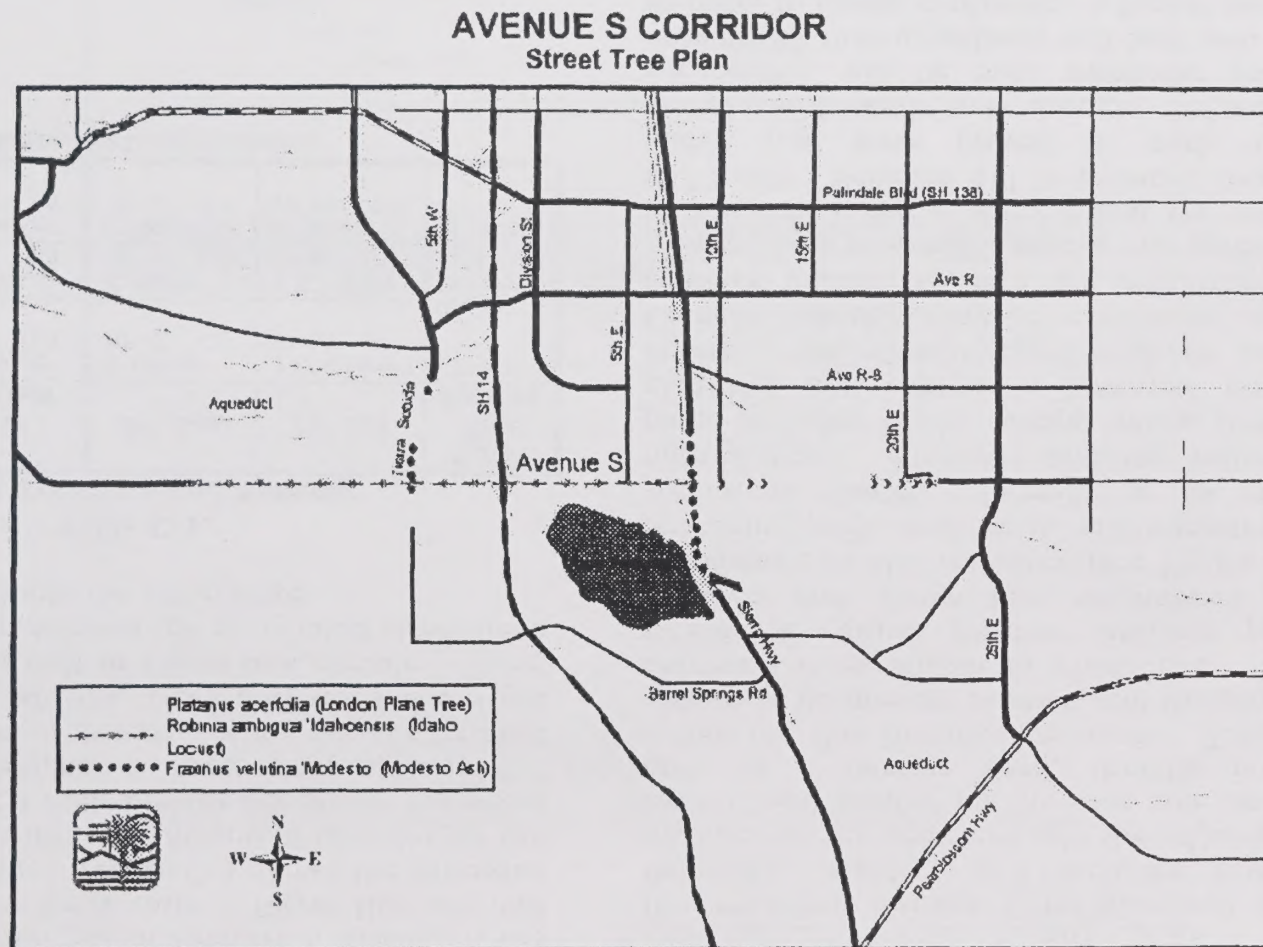


Figure C-4: Street tree designations within the Corridor.

Source: City of Palmdale Traffic/Transportation Division

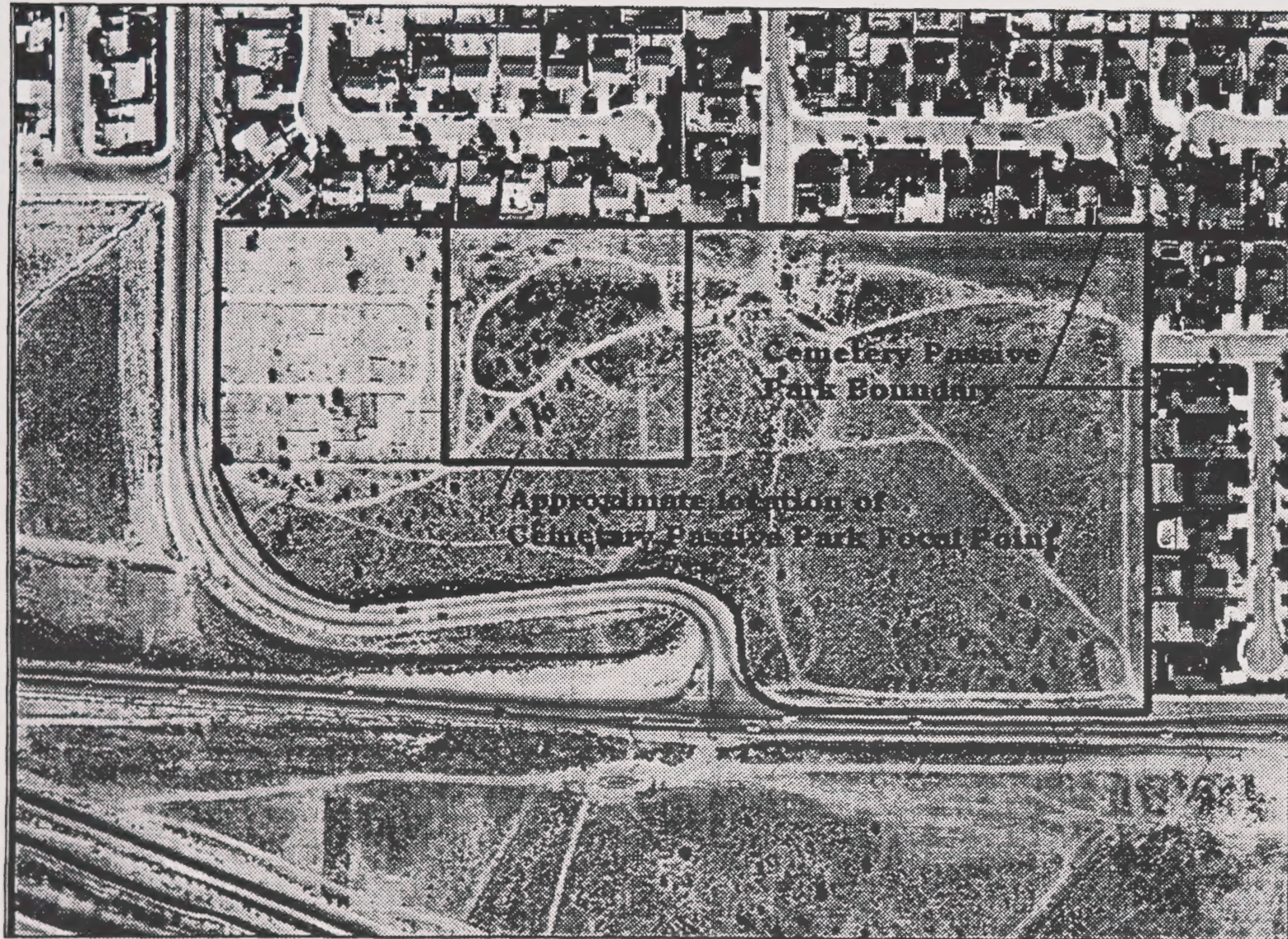


Photo C-1. Location of Cemetery Passive Park

Source: City of Palmdale Planning Department

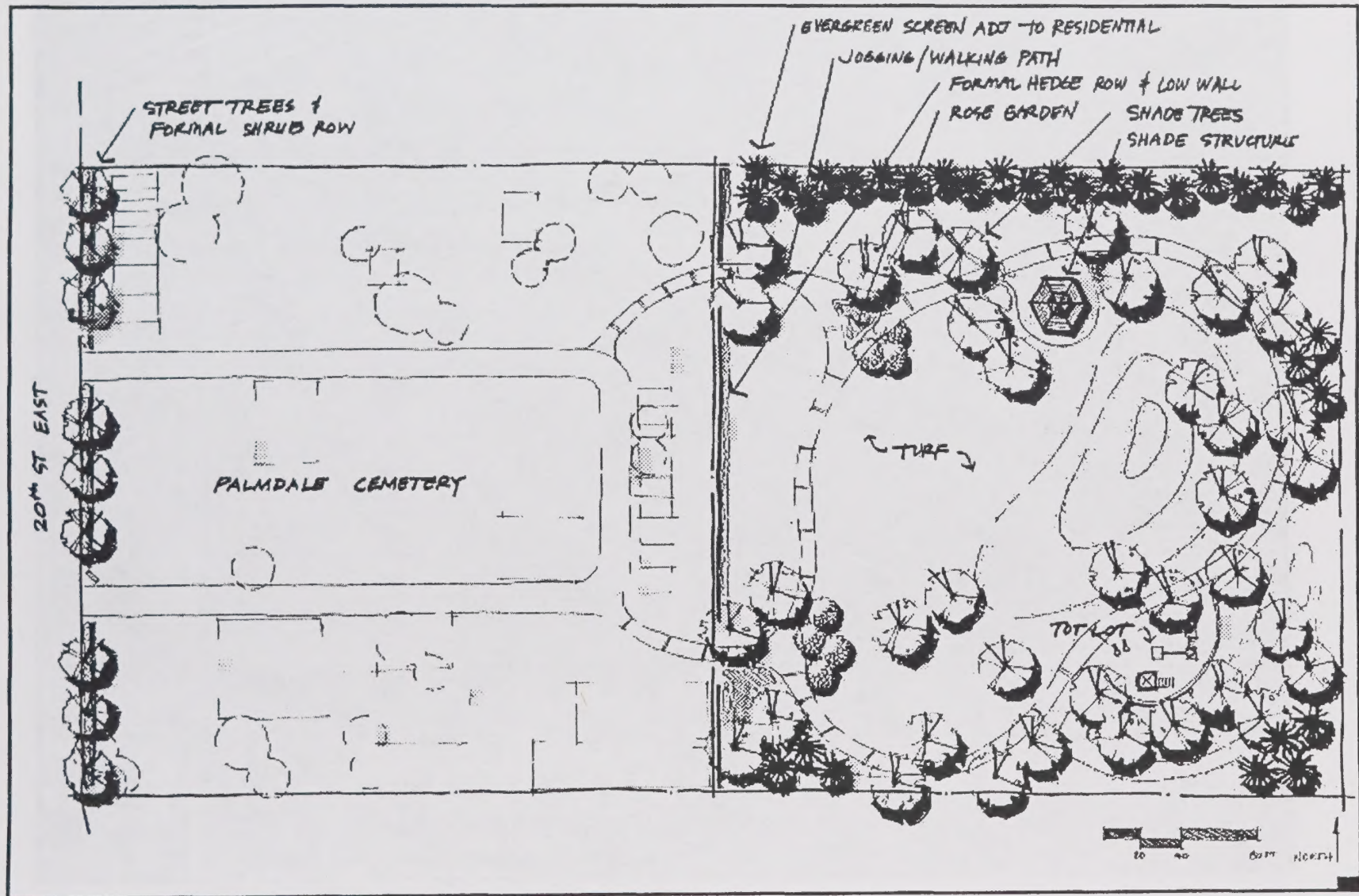


Figure C-5 Passive park focal point landscape schematic

Source: City of Palmdale Landscape Architect

Table C-2
Avenue S Corridor Area Plan Plant List

Desert Accents			
Botanical Name	Common Name	Botanical Name	Common Name
Agave americana	Century Plant	Yucca aloifolia	Spanish Bayonet
Agave deserti	Desert Agave	Yucca baccata	Datil Yucca
Agave shawii	Shaw's Century Plant	Yucca brevifolia	Joshua Tree
Agave vilimoriniana	Octopus Agave	Yucca elata	Soaptree Yucca
Atriplex lentiformis	Quail Bush	Yucca filamentosa	Adam's Needle
Chrysotamnus nauseosus	Rabbit Bush	Yucca gloriosa	Spanish Dagger
Dasyliion sp.	Desert Spoon	Yucca recurvifolia	Pendulous Yucca
Fouquieria splendens	Ocotillo	Yucca rigida	no common name
Hesperaloe parvifolia	Red Yucca	Yucca rostrata	Beaked Yucca
Larrea tridentata	Creosote Bush	Yucca schidigera	Mohave Yucca
Nolina sp.	Bear Grass	Yucca whipplei	Whipple's Yucca
Opuntia sp.	Prickly Pear		
Grasses			
Botanical Name	Common Name	Botanical Name	Common Name
Pennisetum setaceum & cvs.	Fountain Grass	Stipa sp	Feather Grass, Needle Grass
Ground Covers			
Botanical Name	Common Name	Botanical Name	Common Name
Baccharis pilularis	Dwarf Coyote Bush	Lonicera japonica halliana	Hall's Honeysuckle
Euonymus fortunei	Winter Creeper	Rosmarinus officianalis	Rosemary
Hypericum calycinum	St. Johnswort	Teucrium chamaedrys	Germander
Juniperus sp.	Juniper		
Perennials			
Botanical Name	Common Name	Botanical Name	Common Name
Achillea	Yarrow	Melampodium leucanthum	Blackfoot Daisy
Coreopsis sp.	Coreopsis	Oenothera sp.	Mexican Evening Primrose
Erigeron karvinskianus	Mexican Daisy	Perovskia atriplicifolia	Russian Sage
Gaillardia grandiflora	Blanket Flower	Salvia sp.	Sage
Gazania "Copper King"	Copper King Gazania	Tagetes lemmonii	Mountain Marigold
Marrubium vulgare	Horehound	Vervena sp.	Verbena
Shrubs			
Botanical Name	Common Name	Botanical Name	Common Name
Abelia grandiflora prostrata	Prostrate abelia	Buxus microphylla japonica	Japanese Boxwood
Acacia greggii	Catclaw Acacia	Caesalpinia sp.	Bird of Paradise Bush
Arbutus unedo	Strawberry Tree	Calliandra californica	Baja Fairy Duster
Arctostaphylos sp.	Manzanita	Cassia artemisioides	Feathery Cassia

Appendix C—Landscape Design Standards
Avenue S Corridor Area Plan

<i>arturplex hymenelytra</i>	Desert Holly	<i>Cassia nemophila</i>	Desert Cassia
<i>Baccharis sarothroides</i>	Desert Broom	<i>Cercis occidentalis</i>	Western Redbud
<i>Berberis thunbergii</i>	Barberry	<i>Chilopsis linearis</i>	Desert Willow
<i>Cistus</i> sp.	Rockrose	<i>Ligustrum japonicum</i>	Privet
<i>Cordia</i> sp.	Cordia	<i>Myrtus communis</i>	Myrtle
<i>Cotoneaster</i> sp.	Cotoneaster	<i>Nerium oleander</i>	Oleander
<i>Cowania mexicana</i>	Cliff Rose	<i>Photinia fraseri</i>	Photinia
<i>Dalea greggii</i>	Trailing Indigo Bush	<i>Pittosporum tobira</i>	Mock Orange
<i>Dalea pulchra</i>	Indigo Bush	<i>Pyracantha</i> sp.	Firethorn
<i>Eleagnus pungens</i>	Silverberry	<i>Raphiolepis</i> "Majestic Beauty"	Majestic Beauty <i>Raphiolepis</i>
<i>Encelia farinosa</i>	Desert Encelia	<i>Rosa banksiae</i>	Lady Bank's Rose
<i>Fallugia paradoxa</i>	Apache Plume	<i>Rosa</i> sp.	Rose
<i>Heteromeles arbutifolia</i>	Toyon	<i>Ruellia</i> sp.	Ruellia
<i>Juniperus californica</i>	California Juniper	<i>Salvia greggii</i>	Autumn Sage
<i>Juniperus</i> sp.	Juniper	<i>Santolina chamaecyparissus</i>	Lavender Cotton
<i>Lagerstroemia indica</i>	Crape Myrtle	<i>Tecoma stans</i> v. <i>angusta</i>	Hardy Yellow Trumpet Flower
<i>Lavandula</i> sp.	Lavender	<i>Viburnum</i> sp.	Snow Ball Bush
<i>Leonotis leonurus</i>	Lion's Tail	<i>Xylosma congestum</i>	Shiny <i>Xylosma</i>
<i>Leucophyllum</i> sp.	Texas Ranger		
Trees			
Botanical Name	Common Name	Botanical Name	Common Name
<i>Albizia julibrissin</i>	Silk Tree, Mimosa	<i>Pinus brutia</i>	Calabrian Pine
<i>Broussonetia papyrifera</i>	Paper Mulberry	<i>Pinus eldarica</i>	Mondell Pine
<i>Calocedrus decurrens</i>	California Incense Cedar	<i>Pinus halepensis</i>	Aleppo Pine
<i>Celtis australis</i>	European Hackberry	<i>Pinus monophylla</i>	Single Leaf Pinon Pine
<i>Celtis sinensis</i>	Chinese Hackberry	<i>Pistacia atlantica</i>	Mt. Atlas Pistacio
<i>Cercidium floridum</i>	Blue Palo Verde	<i>Pistacia chinensis</i>	Chinese Pistache
<i>Cercidium microphyllum</i>	Little Leaf Palo Verde	<i>Pithecellobium flexicaule</i>	Texas Ebony
<i>Cercidium praecox</i>	Sonoran Palo Verde	<i>Plantanus acerifolia</i>	London Plane Tree
<i>Cercis canadensis</i>	Easter Redbud	<i>Prosopis alba</i>	Argentine Mesquite
<i>Chitalpa tashkentensis</i>	Chitalpa	<i>Prosopis chilensis</i>	Chilean Mesquite
<i>Cupressus glabra</i>	Arizona Cypress	<i>Prosopis glandulosa</i>	Texas Mesquite
<i>Fraxinus oxycarpa</i>	Raywood Ash	<i>Prunus caroliniana</i>	Carolina Laurel Cherry
<i>Fraxinus velutina</i> "Modesto"	Modesto Ash	<i>Quercus suber</i>	Cork Oak
<i>Fraxinus velutina</i> "Rio Grande"	Fantex Ash	<i>Quercus ilex</i>	Holly Oak
<i>Gleditsia triacanthos inermis</i> c.v.	Thornless Honey Locust	<i>Robinia ambigua</i> "Idahoensis"	Idaho Flowering Locust
<i>Koeleruteria paniculata</i>	Goldenrain Tree	<i>Sophora japonica</i>	Japanese Pagoda Tree
<i>Parkinsonia aculeata</i>	Mexican Palo Verde	<i>Zelkova serrata</i>	Sawleaf Zelkova
Vines			
Botanical Name	Common Name	Botanical Name	Common Name
<i>Campsis radicans</i>	Trumpet Vine	<i>Macfadyena unguis-cati</i>	Catclaw Vine
<i>Campsis tagliabuana</i> "Madam Galen"	Trumpet Creeper	<i>Parthenocissus tricuspidata</i>	Boston Ivy
<i>Euonymus fortunei radicans</i>	Winter Creeper	<i>Rosa banksiae</i>	Lady Bank's Rose
<i>Lonicera</i> sp.	Honeysuckle	<i>Wisteria</i> sp.	Wisteria